

AAPS Blended Unit Planning Document #2

Grade Level/Content Area

3rd Grade Science and Literacy

Unit Title

Hazardous Climate

Unit Abstract

A description of the featured unit of study that characterizes the subject matter to be studied and states very generally what students are expected to learn and the types of learning activities that will be conducted to provide opportunities for learning.

We will be working to develop a plan to protect our school garden from the weather hazard, frost. We will grow and monitor how our plants are affected by frost during this period. We will also analyze and collect data over a time period. We will understand how climate and weather patterns contribute to this understanding by looking at case studies and examples of other weather hazards in different climates (as well as non-examples). We will collect and analyze data related to the project.

All classes will be focusing on the hazard of frost and how to mitigate its effects.

Standards/Benchmarks

Identifying Expectations and Standards helps to ensure curricular alignment.

Are the appropriate goals (ie: content standards, benchmarks, curriculum objectives) identified?

NGSS

3-ESS2-1. Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.

3-ESS2-2. Obtain and combine information to describe climates in different regions of the world.

3-ESS3-1. Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.*

**The performance expectations marked with an asterisk integrate traditional science content with engineering through a Practice or Disciplinary Core Idea.*

CCSS Literacy

Research

- RI.3.1 - Ask and answer questions to show understanding of a text.
- RI.3.2 - Determine the main idea of a text.
- RI.3.4 - Determine the meaning of general domain specific words in a relevant topic.
- RI.3.5 - Use text features and search tools to locate information.
- RI.3.7 - Use information from illustrations and key words (5w) to show understanding.
- RI.3.8 - Describe logical connections (focus: sequence).
- RF.3.3.C - Decode multisyllable words.
- W.3.7 - Conduct short research projects that build knowledge of a subject.
- SL.3.2 - Determine main idea of a text through diverse formats.

Production & Performance

- W.3.2 - Write informative/explanatory texts.
- W.3.2.A - Introduce topic and group related information together with pictures when useful.
- W.3.2.B - Develop the topic with facts, definitions and details.
- W.3.2.C - Use linking words and phrases to connect ideas.
- W.3.2.D - Provide a conclusion.
- SL.3.4 -
- SL.3.6 -

Essential Questions

A meaning of “essential” involves important questions that recur throughout one’s life. Such questions are broad in scope and timeless by nature. They are perpetually arguable – What is justice? Is art a matter of taste or principles? How far should we tamper with our own biology and chemistry? Is science compatible with religion? Is an author’s view privileged in determining the meaning of a text? We may arrive at or be helped to grasp understandings for these questions, but we soon learn that answers to them are invariably provisional. In other words, we are liable to change our minds in response to reflection and experience concerning such questions as we go through life, and that such changes of mind are not only expected but beneficial. A good education is grounded in such life-long questions, even if we sometimes lose sight of them while focusing on content mastery. The big-idea questions signal that education is not just about learning “the answer” but about learning how to learn. (Wiggins, Understanding by Design)

How does weather (frost) affect the way we grow our food and how can we help?

Student will know...

Summarizing the key content by setting up knowledge and skill goals for the unit helps designers focus lesson content.

- What is frost?
- What does it look like and feel like?

How does it affect plants and farmers in our area?
 Why is it hazardous?
 Determine the main idea of a text.
 Analyze a text to by using text features.
 Write an informative text.
 Represent data on a graph.

Students will be able to....

Summarizing the key skills goals for the unit helps designers focus lesson content.

- Organize data
- identify main idea
- make connections
- collaborate to create a design to help reduce impact of frost

Current Teaching Design*

List every activity that you currently complete in your traditional classroom situation to teach this unit.

See Below. Some activities are listed to work in conjunction and are integrated into subject areas, for example, the class is learning about informational text features during reading and also using what they to know to compose an informational book on frost.

Models

Recommended models for implementation. (ie flex, station rotation, lab rotation, flipped, individual, A La Carte, enriched virtual)

See Below.

Instruction and Activities

Based on what you have learned so far what instruction and activities will students engage with in the face-to-face (F2F) environment? Which will you now move to the online environment? For more support in planning this way, [watch this video](#).

Teaching Design	F2F	Online
1. Entry Event	<ul style="list-style-type: none"> • Students visit school garden to garner 	<ul style="list-style-type: none"> • Students use take pictures on SeeSaw to

2. Driving Question and Need To Know	<p>interest and curiosity around plants and weather's affects on plants.</p> <ul style="list-style-type: none"> ● Guide students to driving question 	<p>post pictures of what they see</p> <ul style="list-style-type: none"> ● Using background knowledge they may label what they see and what plants need to survive
3. Need to Know Sort	<ul style="list-style-type: none"> ● May have the option of using sticky notes if Padlet is not accessible 	<ul style="list-style-type: none"> ● Using Padlet students post what else they would like to know or need to know in order to answer their driving question
4. KWL Climate and Weather	<ul style="list-style-type: none"> ● Whole group discussion of what we already know, want to know and learned (completed later) about frost 	<ul style="list-style-type: none"> ● KWL chart can be posted to SeeSaw for reference for later
5. Data Collection (you can collect data throughout the week as a morning work activity)		<ul style="list-style-type: none"> ● Students use Google Classroom Sheets premade by teacher and sent out to record temperature data a few times a week ● Teacher will need to find weather websites and links for students to collect data from and can alternate between looking up online and measuring temperature outside
6. Plant Seeds and record growth. (control group and another outside)	<ul style="list-style-type: none"> ● Teacher plants pea plants (or any other plants) before hand so that plants are sprouting by the time students are ready to observe weather affects ● There is a control group and a group that will be observed when placed outside especially when there is frost. 	<ul style="list-style-type: none"> ● Students work collaboratively to record data for their group's plant. ● Students use SeeSaw and Google Classroom to post pictures of their plants as well as have the option to draw what they see. ● Keep a Google Classroom journal or running document that students can enter data into
7. Informational Text features	<ul style="list-style-type: none"> ● Explore informational texts during guided groups 	<ul style="list-style-type: none"> ● Read articles on Newsela or readworks.org ● Use tools to annotate online ● Kahoot! For informational text features
8. Informational Book on Effects of Frost	<ul style="list-style-type: none"> ● Students create their own book using a graphic organizer 	<ul style="list-style-type: none"> ● Send out Template for the book on Google Classroom ● Students may use pictures and data from their observations in class

9. Design an app to help farmers predict and mitigate the effects of frost	<ul style="list-style-type: none"> Students work in group to design app pages for an app that farmers can use to help mitigate the effects of frost 	<ul style="list-style-type: none"> Hopscotch to design the app
10. Share and Present work.	<ul style="list-style-type: none"> Share and present work 	<ul style="list-style-type: none"> Share on SeeSaw for parents and family audience members

Assessments

Based on what you have learned so far what instruction assessments will students engage with in the face-to-face (F2F) environment? Which will you now move to the online environment? Think about how you balance your assessment strategies (formative and summative).

F2F	Online
<ul style="list-style-type: none"> Collaboration with teams Graphic organizers Whole group and small group conversations 	<ul style="list-style-type: none"> Google Classroom work SeeSaw drawings and observations HopScotch final Product Data collection

Resources

A selected repertoire of high quality resources that would equip a teacher to teach the unit is listed here.

F2F	Online
	<ul style="list-style-type: none"> One to one technology integration Seesaw Padlet Google classroom HopScotch

TO-DO*

What items must you complete in order to finish the creation of this unit. If any of the items to the right must be modified for online delivery list it here. For example, create a short podcast, find a YouTube video, write a discussion question, re-write directions for an activity so it can take place online.

- Graphic Organizers and writing template for the Frost Book
- Template for App
- KWL Chart
- Google Sheets
- Newsela and readworks articles on Frost