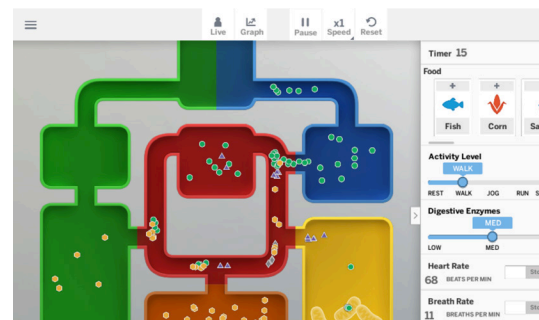
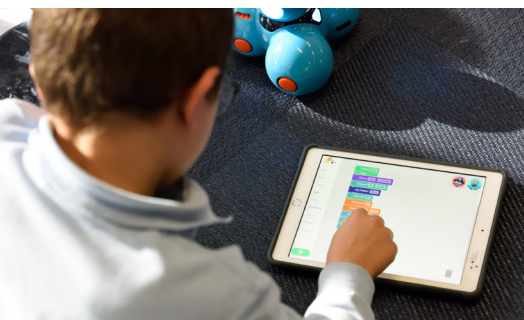
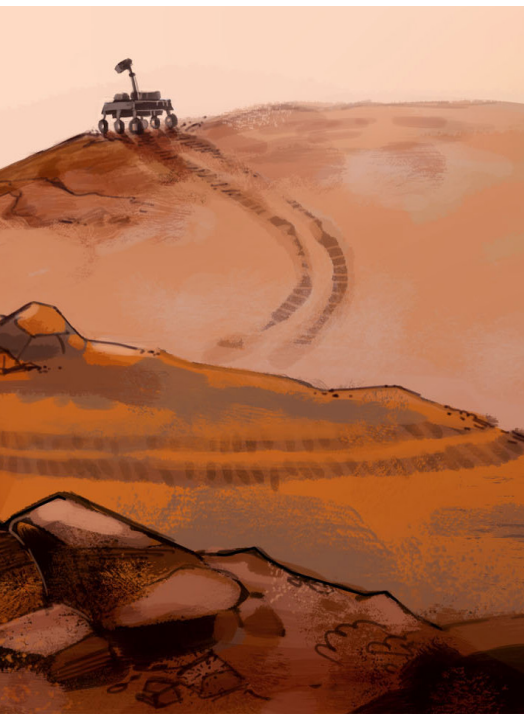


Adapting Amplify Science for remote learning



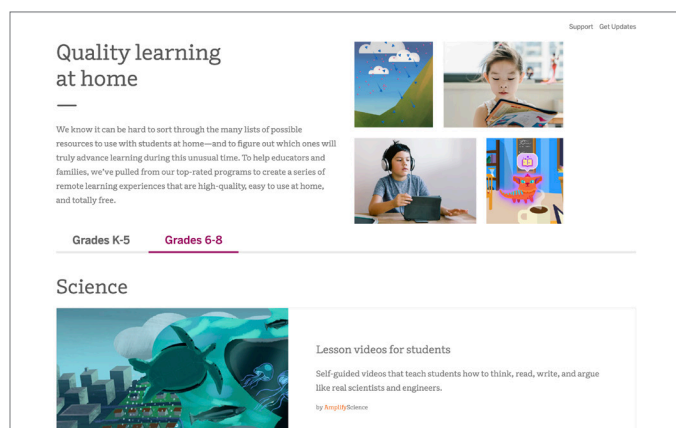
Hands-on investigations

Hands-on activities present unique challenges for remote learning. There are, however, several workarounds that will enable you to share the main takeaways of the would-be hands-on experience with students.

1. Use the free resources we've compiled. A team of teacher volunteers are filming themselves teaching Amplify Science lessons, and we are posting **these videos** online for free. When possible, the teachers include demonstrations of the hands-on activities as they come across them in the lessons. Sometimes, as you can imagine, it isn't possible to obtain the necessary materials. In these cases, the teachers either skip the activity or modify it—you can use their adaptations as a guide for how to handle that respective hands-on activity.
2. For investigations that involve common household materials (e.g., plastic baggies, ice, etc.), have students conduct the activity independently.
3. Locate a video of a similar activity on YouTube and share this with students.
4. Describe the activity and provide students with possible data or results.
5. If possible, organize a video demonstration with students or record a demonstration of a hands-on activity with the supplies that you have available (especially if you're able to get your hands on your Amplify Science kit).
6. For any hands-on activity that calls for students to manipulate printed cards (like a card sort) or to engage in a science game, you could provide copies of the materials. All print materials included in the kits are also available in PDF from within the digital Teacher's Guide (under Printable Resources in the Unit Guide for each unit, when logged in at **learning.amplify.com**). If you have access to a printer and your district has arranged pickup/dropoff logistics, you could download the PDF file, print the necessary materials, and hand them out to students. In this case, the expectation would be that students engage in the activity with their families.

7. And of course, because of the Amplify Science Do, Talk, Read, Write, Visualize approach, students will have multiple opportunities to explore every major idea in the unit throughout the lessons. This means you can consider skipping the hands-on experience and know that your students will have other modalities through which to access the concepts.

Before choosing an option, be sure to follow your district's guidelines and suggestions.



freeresources.amplify.com

Discussion

Discussion activities may be possible to complete at home, with slight adjustments. Two ideas for adjustments include:

1. Students could complete a modified version of the discussion with a sibling or other family member (taking into consideration that adults' time is limited).
2. Students could call a friend or classmate to have the discussion on the phone.



Science Seminar

The Science Seminars have a few assumptions built into them that make them difficult to adapt to a remote learning setting. They assume first that students have analyzed evidence presented in previous lessons; second, that students can hear counter-evidence and counterarguments from fellow students; and third, that students can respond to their peers' arguments with other evidence-based arguments.

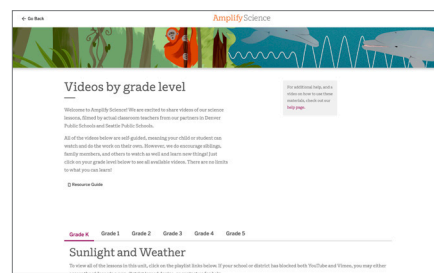
With these assumptions in mind, there are a few options when considering how to deal with the Science Seminars.

1. Skip the Science Seminar and go straight to the end-of-unit writing assignment. Note that students would still need access to the evidence cards to complete the writing.
 - a. Set up a video chat using Google, Zoom, or any other platform that has been working for you, and have your students meet up at an assigned time to conduct the discussion.
 - b. Have students record themselves presenting their arguments and post to an established class forum (e.g., Google Classroom).
 - c. Have students engage in a discussion forum, writing out their arguments and evidence and responding to their peers' arguments, rather than engaging in oral discourse.
 - d. Pique students' curiosity by providing an original argument for them to consider (one that is perhaps not best supported by the evidence), then having students reply to it with a written argument of their own.
2. If you do want to hold the Seminar, send students PDF copies of the evidence cards and ask them to analyze and annotate each one prior to the meeting time; providing the Reasoning Tool might be helpful for them as they do so independently. Then, document some norms that would be appropriate for the way in which you will have students engage in the discussion, options being:

Reading articles

Reading activities are good candidates for adaptation to a remote learning setting. There are a few ways to get these readings to students:

1. If students have internet access and a supported device at home, they can access digital versions of the articles by logging into their Amplify Science accounts (learning.amplify.com) and navigating to the digital library OR to the lesson in which the reading you are assigning occurs. In this case, you can have your students annotate their articles directly in the Amplify Science digital student experience, moving through the activities as if they were in class. Note that students also have access to a downloadable PDF version of each article in the Digital Resources area of each of their lessons that include reading. Parents can log in to the curriculum to assist their students as needed using the login credentials provided [here](#).
2. We have a cadre of teacher volunteers who are currently recording themselves teaching the lessons of the last unit of each grade level. Whenever lessons feature readings, the teachers will read the articles aloud! Find the lesson videos [here](#). If your students are more digitally savvy, you could send this URL directly to them or post a link in any kind of classroom forum you might have (Schoolology, Google Classroom, etc.).
3. For students who do not have internet or device access, you can find PDF versions of the articles, as well as the Investigation Notebook pages that go with them, on the [remote learning resources website](#). Just look for the lesson in the dropdown menus and download the appropriate PDF file. You can print these materials and send them home to students if your district has an arranged pickup/dropoff system.
4. Remember also that you have access to a PDF compilation of all of a unit's science articles in your digital Teacher's Guide (learning.amplify.com). You can find these on the Printable Resources side of the Unit Guide of each unit when logged in. These can be used if you want to send students the full collection of a unit's articles in print, rather than lesson-by-lesson as the above would facilitate.



Lesson videos

Writing

Writing activities do not require much modification in a remote learning setting at these grade levels, so you may be able to keep them as-is. That being said, here are a few other options you can consider:

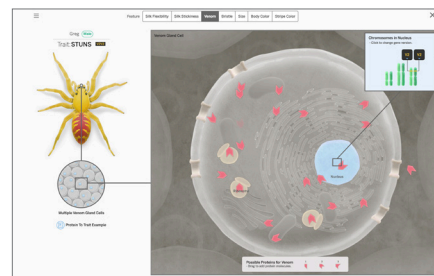
1. Send the volunteer-produced [video](#) of the lesson to students, accepting the modifications made. Students can then do their writings in any format: paper, in a forum, etc.
2. Have students log in to Amplify Science (learning.amplify.com) and submit their writings there.
3. Send students PDF copies of any copymaster sheets or Investigation Notebook pages, completing their writings there.

Sims

Students can access the Sims using their own login credentials at learning.amplify.com. If they don't remember their login information, or if they're new to Amplify, they can use the remote login found [here](#). Please note, however, that students will not be able to submit their work digitally if using the remote login. The Student Investigation Notebook pages associated with the Sim activities can be found within the downloadable home lessons [here](#), though.

If students do not have supported devices to access the Sims, you could provide sample Sim data or record a video of yourself using the Sim, thinking aloud, and reaching some conclusions. Also, most lessons that contain Sim activities have the Sim demonstrated by the teacher volunteers (for the last two units) in the videos posted [here](#).

If your students do not have internet access or an internet-connected cell phone, the Sim activities must be skipped.



Traits and Reproduction Sim

Data tools

Students can access the data tools using their own login credentials at learning.amplify.com and navigating to the lessons in which they are used. If students don't remember their login information or if they are new to Amplify, they can use the remote login found [here](#). Please note, however, that students will not be able to submit their work digitally if using the remote login.

What to do if students cannot access the Practice Tools:

1. You could record a video of yourself using the Practice Tool, thinking aloud and reaching some conclusions as you do.
2. A team of teacher volunteers are filming themselves teaching Amplify Science lessons, and we are posting these videos online for free. If a lesson includes any Practice Tool activities, the teacher volunteer will demonstrate it in the video. Note: Only the final two units of each year have videos being made for them.

Modeling tools—digital

Students can access the Modeling Tool using their own login credentials at learning.amplify.com and navigating to the lessons in which it is used. If they don't remember their login information or if they are new to Amplify, they can use the remote login found [here](#). Please note, however, that students will not be able to submit their work digitally if using the remote login.

What to do if students cannot access the digital Modeling Tools:

1. You could record a video of yourself using the Modeling Tool, thinking aloud and reaching some conclusions as you do.
2. A team of teacher volunteers are filming themselves teaching Amplify Science lessons, and we are posting these videos online for free. If a lesson includes any Modeling Tool activities, the teacher volunteer will demonstrate it in the video. Note: Only the final two units of each year have videos being made for them.
3. If your students have neither internet access nor an internet-connected cell phone, the models that students produce in the digital Modeling Tools can often be done on paper. In fact, since the main purpose of the Modeling Tool activities is often for students to express their thinking, you could ask students to demonstrate their understanding about the respective concept in any creative way they can—or example, by creating a labeled diagram.

Modeling tools—paper

The PDF for paper-based Modeling Tools can be downloaded from the digital resources area of the lessons in which they occur when logged into the digital Teacher's Guide (learning.amplify.com). These can be printed and handed out to students (assuming your district has arranged pickup/dropoff logistics), or sent to them via email/established forum (e.g., Google Classroom). If a student has the PDF file and cannot print them out, they can recreate the models on blank paper to the best of their ability.

Alternatively, just like with the digital Modeling Tool activities, because these are often intended to allow students to express their thinking, you can have students demonstrate their understanding of the respective concepts using whatever materials they can.

Unit assessments

First, it is worth recognizing that, in general, assessments will be difficult in a remote learning setting, especially if your district does not have an arranged pickup/dropoff system or an established online forum (e.g., Google Classroom) in place.

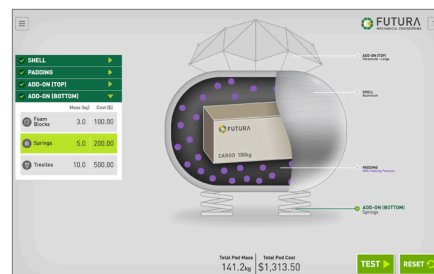
There are a couple of options for the Critical Juncture and Pre- and End-of-Unit Assessments, though.

1. If students have access to the internet and a supported device, you can have them log in using their credentials at learning.amplify.com and complete the assessments online. Remember to unlock the assessments via the digital Teacher's Guide first, though!
2. If students do not have access to their digital accounts, you can download the PDFs of the assessments from the Digital Resources area of the lessons in which the assessments occur, share them with students in whichever way is possible in your circumstances, and have students hand them in however they can.
3. You might consider having students collect various work products they have completed during this time at home in lieu of the Pre- and End-of-Unit Assessments. This would work similarly to the process outlined in the portfolio assessments described in the [Program Guide](#). Note that, because students won't have access to the full and true version of unit activities, you may want to adapt the portfolio assessment to be more forgiving in terms of what counts as a work product.

Engineering Internships

The Engineering Internships are excellent candidates for independent at-home learning, provided students have access to the internet and a supported device. Though they are designed to be completed in collaborative pairs or groups, most of the activities can be completed individually.

As long as teachers send the daily messages and forms to students, students can complete the activities at their own pace and submit them to teachers via the Futura Workspace. If teachers prefer, they can download the PDF of the Engineering Notebook, copymasters, and dossier from the [remote learning website](#) and have students complete the Internship on paper, to be turned in at a later time. With either option, students will still need access to the Engineering Internship's design tool. If students are not able to access the design tool, teachers could prepare a set of sample data to give to students, which students would use to write the proposal. Note that there are usually 1 or 2 hands-on activities within the Internships. For those activities, teachers can follow the hands-on guidelines or simply choose to skip them. One final note: Internships are designed to be taught after the associated core units, so teachers will want to consider whether their students have enough content background to complete the Internship with little guidance.



Force and Motion Engineering Internship Sim

Videos

Students have access to all student-facing videos within their own Amplify accounts. They can access these by referring to the Digital Resources area of the lessons in which they occur. Additionally, when logged into the digital Teacher's Guide (learning.amplify.com), teachers can download all Amplify Science videos from the Digital Resources area of any lesson that includes them. Feel free to share any videos you download with your students via email or any established forum you are familiar with (e.g., Google Classroom). Alternatively, the video recordings that a team of teacher volunteers are making will include the videos if they are in the lesson being recorded. You can send the [link](#) to the website containing these teacher-recorded videos directly to students to have them watch the full lesson recording.

Discourse Routines

(Word Relationships and Write and Share)

The goal of these routines is to give students practice using science language and vocabulary in oral discussions. For Word Relationships, if students are provided with the list of vocabulary, they can create sentences individually and submit them, or even better, share their sentences with a family member or remote partner. For Write and Share, students could complete their writing task individually and share it with a family member.

