



High-Adventure Science

High-Adventure Science Portal Users Guide

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Navigating an Investigation

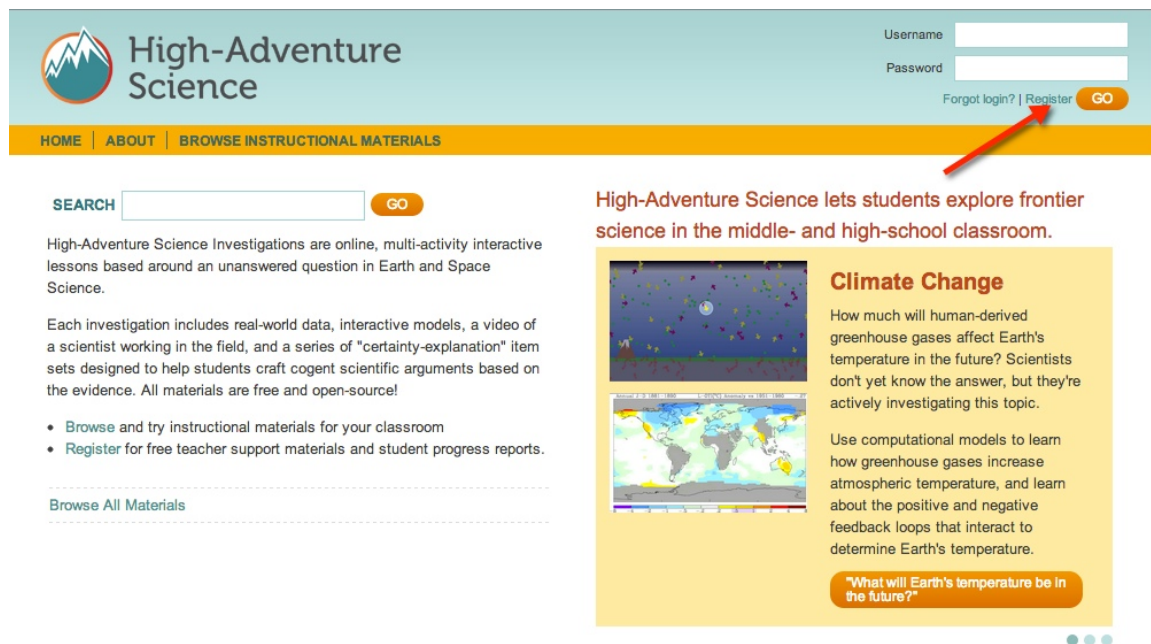
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High-Adventure Science

The Registration Process

Registering for the portal

Go to the main High-Adventure Science website (<http://concord.org/projects/high-adventure-science>) and click on the **Portal** link or go directly there by clicking here: <http://has.portal.concord.org/>



High-Adventure Science lets students explore frontier science in the middle- and high-school classroom.

Climate Change

How much will human-derived greenhouse gases affect Earth's temperature in the future? Scientists don't yet know the answer, but they're actively investigating this topic.

Use computational models to learn how greenhouse gases increase atmospheric temperature, and learn about the positive and negative feedback loops that interact to determine Earth's temperature.

"What will Earth's temperature be in the future?"

If you are a first time teacher click on the Register link in the top corner of the page. Then click "Sign up as a teacher" button.

Sign Up

Sign up as a teacher

Sign up as a student

Complete the form. If you don't find your school listed, click on the blue text "I can't find my school in the list" and you will have a chance to type your school name.


After registering, log into the portal.

Setting up your classes

Once you register and log in, you will see the portal **Home** page which will welcome you and ask you to "create a class."

To create a new class click either on the **create a class** button on the left side or on the blue text that say "create a class." This will bring up a form asking for some information about the class.

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Class Setup Information

Class Name:

Term:

Description:

Class Word:

School:

Grade Levels:

<input type="checkbox"/> 6	<input type="checkbox"/> 7	<input type="checkbox"/> 8	<input type="checkbox"/> 9
<input type="checkbox"/> 10	<input type="checkbox"/> 11	<input type="checkbox"/> 12	

Most of these fields are straightforward.

Name your class. Choose a term. If it is a full year class you can choose **Fall** for the **Semester** field. Give the class a short description.

For **Class Word**, you need to put in a unique ***code word*** to identify this class in our database. If you have students register themselves for your class, you will need to give them this code word to use in their registration process.

Under **Grade Levels** check all that apply for this class.
Then click **Save**.

Browsing instructional materials

To browse the High-Adventure Science materials, click the **Browse Instructional Materials** link in the orange bar.

The new window that is displayed will give you the following information:

If you know what you are looking for you can use the Search function. You can type in “Climate” for example and all Investigations that include the word “climate” in the title will appear.

You can click on the **Preview** button and explore the investigation.

Navigating an investigation An **investigation** contains several days worth of related assignments. Each day is represented by an **activity**. Each **activity** has one or more **sections**, and each **section** has one or more **pages**. On the left side is a hide-able navigation menu showing each activity and sections within that activity. *It is recommended that once you begin an activity that you hide the navigation menu on the left to give more space for the activity pages.* Use the circles (or arrows to the left and right of the circles) in the lower right of the screen to go from page to page.



Assigning Investigations or Activities to your class

Or if you know you want to include the investigation in your class you can click the **Assign to a Class** button.

When you click on the Assign to a Class button you will see the following page which allows you to preview the entire curriculum at once or by each individual activity. To assign the investigation pick click on the “Assign Investigation” button at the top.:

Is there life in space? 2011-2012 [Preview ▼](#) [Assign Investigation](#) [Share ▼](#)
INVESTIGATION

Used in 45 classes.

IS THERE LIFE IN SPACE? 2011-2012 - Activities

Include

<input checked="" type="checkbox"/> Teacher Guide (teacher only) <i>Used in 47 classes.</i>	Preview Share ▼
<input checked="" type="checkbox"/> The Vastness Of Space <i>Used in 46 classes.</i>	Preview ▼ Share ▼
<input checked="" type="checkbox"/> Moving Stars And Their Planets <i>Used in 46 classes.</i>	Preview ▼ Share ▼
<input checked="" type="checkbox"/> Hunting For Planets <i>Used in 46 classes.</i>	Preview ▼ Share ▼
<input checked="" type="checkbox"/> Habitable Conditions Students explore five types of stars to discover which star types provide the most favorable conditions in their orbital zones. <i>Used in 48 classes.</i>	Preview ▼ Share ▼
<input checked="" type="checkbox"/> Looking For Signs Of Life <i>Used in 48 classes.</i>	Preview ▼ Share ▼

You will be asked to select the class(es). Click the check box and then the *Save* button.

Another popup window will show up to let you know if the assignment has been successful. When you have chosen all the investigations you would like to assign to a class, then click on the class title in the left column of the page.

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Assign Materials to a Class

Investigation: **Is there life in space? 2011-2012**

Select Class(es)

☐ Earth Science

Save

Cancel

Assigning individual Activities

You do have the option to choose individual activities to assign to your class.

PLEASE NOTE THAT IF YOU DO THAT THERE MAY BE PREREQUISITE KNOWLEDGE THAT WILL BE MISSING. PREVIEW THE ACTIVITIES CAREFULLY IF YOU ARE GOING TO DO THAT.

To assign individual activities you can search directly for the name of the activity or you can choose to assign individual activities by clicking the checkbox next to the title. When doing this you will see a different button at the top of the page that says "Assign Individual Activities":

Is there life in space? 2011-2012
INVESTIGATION

Preview ▼

Assign Individual Activities

Share ▼

Used in 46 classes.

IS THERE LIFE IN SPACE? 2011-2012 - Activities

Include

☐ **Teacher Guide (teacher only)**
Used in 48 classes.

Preview

Share ▼

☐ **The Vastness Of Space**
Used in 47 classes.

Preview ▼

Share ▼

☒ **Moving Stars And Their Planets**
Used in 48 classes.

Preview ▼

Share ▼

☐ **Hunting For Planets**
Used in 47 classes.

Preview ▼

Share ▼

☒ **Habitable Conditions**
Students explore five types of stars to discover which star types provide the most favorable conditions in their orbital zones.
Used in 50 classes.

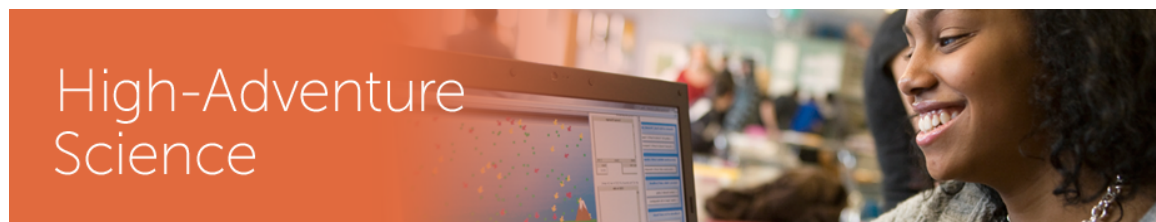
Preview ▼

Share ▼

☐ **Looking For Signs Of Life**
Used in 49 classes.

Preview ▼

Share ▼



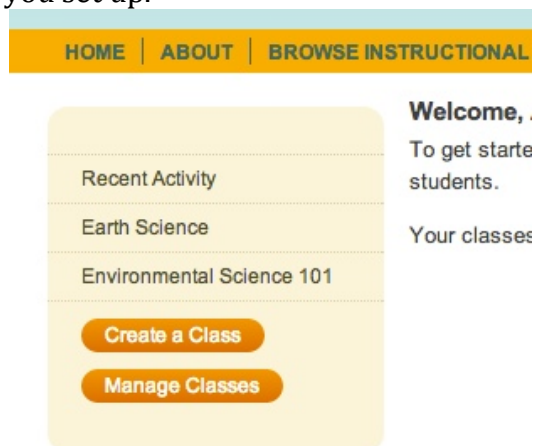
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After you click the Assign Individual activities you will see the following dialog box:



Managing class materials

Click on the “Home” link in the orange band. There you will see the list of the classes you set up.



Once you click on one of your classes you will be presented with information about the class, including a list of materials assigned, student roster, class set up and full status in the left column of the page.

Click on **Materials** link and the page will show you the instructional materials. Be sure to note the tabs in gray and the arrow keys that lets you navigate through each activity assigned. Preview individual activities or the entire investigation and see

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students work completed for that investigation. At this point in the process students have not been assigned so no data should be seen.

There is also text that will show you information specific to that class including the class word, so you can give this word to students who need to register for this class.

[HOME](#) | [ABOUT](#) | [BROWSE INSTRUCTIONAL MATERIALS](#)

Recent Activity

Earth Science

Environmental Science 101

↳ **Materials**

Student Roster

Class Setup

Full Status

Create A Class

Manage Classes

Teacher **Amiee Pallant** Semester **Fall** Class Word **Onion Rings**

Instructional Materials

Manage Materials Assign Materials

◀ Modeling Earth's Climate-2011-2012 Post-Test Climate-2011-2012 Pre-Test Climate-2011-2 ▶

Investigation: Modeling Earth's Climate-2011-2012 Run As Teacher Run As Student
(assigned on 28 September 2012)

- Hide Activities

Run Activity

Activity 1: Teacher's Introduction *(teacher only)*

Run Activity

Activity 2: Climates of the Past, Present, and Future

Run Activity

Activity 3: Interactions Within Earth's Atmosphere

Run Activity

Activity 4: Sources, Sinks, and Feedback

Run Activity

Activity 5: Feedbacks of Ice and Clouds

Run Activity

Activity 6: Using Models to Make Predictions

Student Submissions Run Report

☒ Completed ☐ In Progress ☐ Not Yet Started

ACTIVITY	Climates of...	Interaction...	Sources, S...	Feedbacks ...	Using Mod...
Brown, Charlie	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Brown, Snoopy	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

It pays to order the investigations for you students. To do this, click the **Manage Materials** button or click the **Class setup** link in the left column.

At this point you can *uncheck* the material that you do not want to appear on your and your student's class list.



Drag and drop the material name to reposition it within the list.

Manage Instructional Materials

Uncheck the material that you do not want to appear on your and your student's class list. Drag and drop the material name to reposition it within the list.

- ☒ Is There Life In Space? 2011-2012
- ☒ Post-Test Life In Space 2011-2012
- ☒ Pre-Test Life In Space 2011-2012
- ☒ Nature Of Science Survey 2011-2012

Manage Instructional Materials

Uncheck the material that you do not want to appear on your and your student's class drop the material name to reposition it within the list.

- ☒ Nature Of Science Survey 2011-2012
- ☒ Pre-Test Life In Space 2011-2012
- ☒ Is There Life In Space? 2011-2012
- ☒ Post-Test Life In Space 2011-2012

Registering and adding new students

If you click on the **Student Roster** link in the left column you have the option of registering students yourself and assigning passwords, otherwise you can have your students login as a student on the homepage. As students are registered a student roster will appear with their username and an option for removing students or changing their password.

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Earth Science

- Materials
- Student Roster**
- Class Setup
- Full Status

Create A Class

Manage Classes

Student Roster

Class Name : **Earth Science**
Student Count : 7

Print Student Roster

Register And Add New Student

Name	User Name		
Brown, Charlie	cbrown1	Remove Student	Change Password
Brown, Sally	sbrown1	Remove Student	Change Password
Brown, Snoopy	sbrown3	Remove Student	Change Password
Patty, Peppermint	ppatty	Remove Student	Change Password
Van Pelt, Linus	Ivanpelt1	Remove Student	Change Password
Van Pelt, Rerun	rvanpelt	Remove Student	Change Password
Van Pelt, Lucy	Ivanpelt	Remove Student	Change Password

If a student then logs in they will be asked to complete their registration by being asked some security questions they will use to set up access to their own account in the case they have forgotten their password. Note: It is much easier to tell students the **class word** and have them register themselves than for you to do it yourself.

Please remind students not to create duplicate accounts if they forget their username or password. They can ask you for their username, and they can answer their own security questions to reset their password.

Deactivating a class or an Investigation

To make a class inactive, then click the **Manage Classes** button. A new window will appear. You can uncheck that class on your list. All data for the inactive class will be preserved. You can drag and drop the class to reorder it.

Manage Class List

Checked classes appear on your home page. To make a class inactive, uncheck its box. All data for inactive classes is preserved. Drag and drop class to reorder it in the list.

My Classes (2 Total, 2 Active)

Active classes

<input checked="" type="checkbox"/>	Earth Science	Copy Class
<input checked="" type="checkbox"/>	Environmental Sci...	Copy Class



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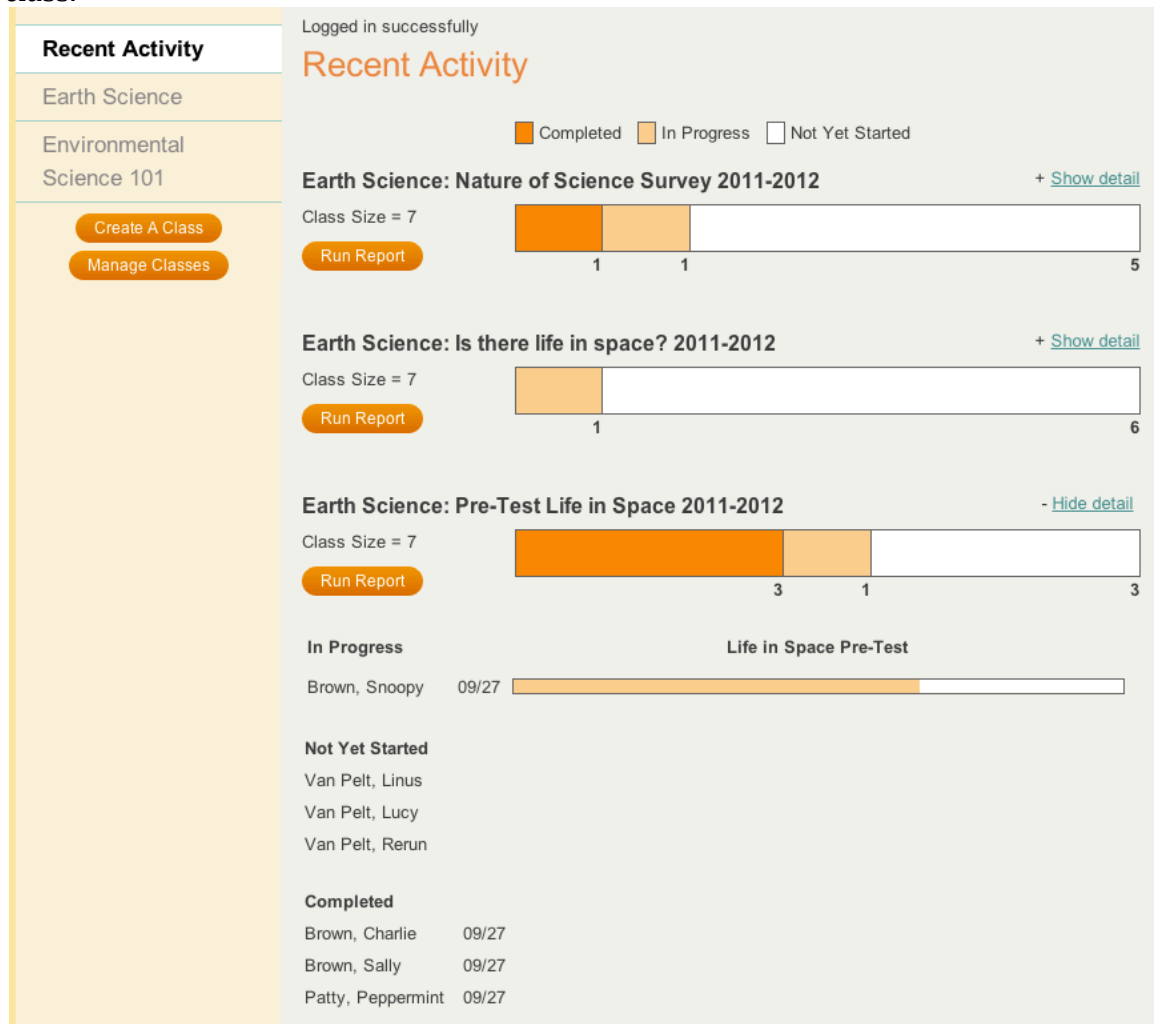
If you no longer want a student to see an **investigation or activity** that has been assigned, but you would like to continue viewing student work on that investigation, then click the **Class Setup** link in the left hand column. Uncheck the material that you do not want to appear on your student's class list.

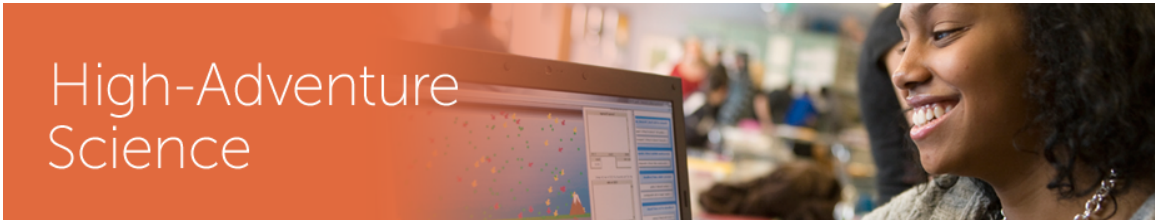
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Following Student Progress

Recent activity

When you first log in. You will see recent activity graphs. This will give you a quick snapshot of who has completed work, who is still working on some of the activities and who has not yet started. You get an overview bar graph or you can click on the show details link above each bar and get information on the individual students in a class.





Student progress

You can also see how far along each student is by activity. In the case below three students have complete the activity, one student is in progress and 3 other students have yet to begin the activity.

If you click on the Run Report button you will get more details about student work.

Recent Activity

Earth Science

↳ Materials

Student Roster

Class Setup

Full Status

Environmental Science 101

Create A Class

Manage Classes

Teacher Amiee Pallant Semester Fall Class Word Feldspar

Instructional Materials

Manage Materials Assign Materials

Nature of Science Survey 2011-2012Pre-Test Life in Space 2011-2012Is there life in spac

Investigation: Pre-Test Life in Space 2011-2012

(assigned on 27 September 2012)

Run As TeacherRun As Student

Hide Activities

Run ActivityActivity 1: Life in Space Pre-Test

Student Submissions

Run Report

CompletedIn ProgressNot Yet Started

ACTIVITY	Life in Space Pre-Test
Brown, Charlie	<div></div>
Brown, Sally	<div></div>
Brown, Snoopy	<div></div>
Patty, Pepp...	<div></div>
Van Pelt, Li...	<div></div>
Van Pelt, Lucy	<div></div>
Van Pelt, Re...	<div></div>

I




Viewing reports

Each assigned activity has its own links for generating reports. The **Run Report** link will create a summary of all submitted student work.


There are three basic types of questions: Multiple Choice, Open response, Image snapshots

Multiple choice

The summary page will show multiple choice questions with a histogram of student choices, making it easy to see which distractors are getting the most attention. Green indicates the correct answer. You can see all individual responses by using the  icon.

	1. toward Earth.	<div><div></div></div>	25.0%	1
✓	2. away from Earth.	<div><div></div></div>	50.0%	2
	3. in an elliptical orbit around the Sun.	<div><div></div></div>	0.0%	0
	4. in a circular orbit around the Sun.	<div><div></div></div>	0.0%	0
	Not answered	<div><div></div></div>	25.0%	1
		Totals:	100.0%	4

Open response

Click the  icon to see a list of student responses.


2. Explain your choice in the previous question.		Hide responses 
Answered	4	
Skipped	0	
Total	4	
Charlie Brown	Just because we haven't found it doesn't mean it isn't ther.e	
Sally Brown	because	
Snoopy Brown	Because there are so many planets why not?	
Peppermint Patty	because I heard of evidence in the news	

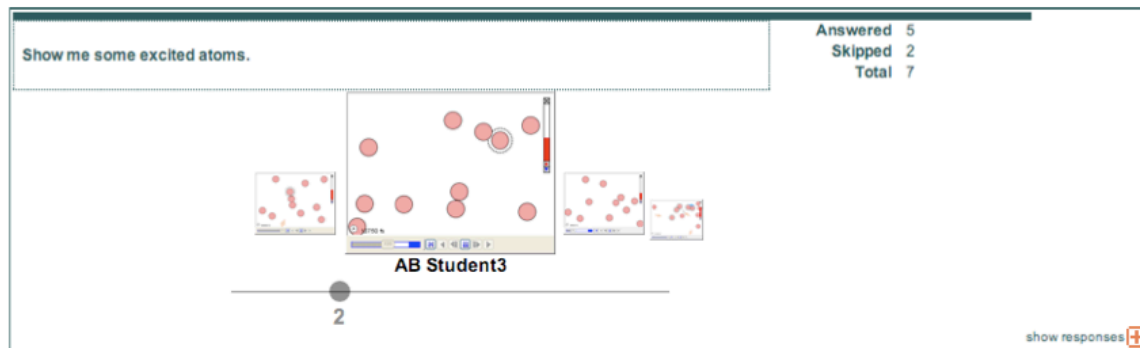
Image snapshots

Image snapshots are shown using a cover-flow plugin. You can scan through them by dragging the slider back and forth. If you click on an image you will see a zoomed in version of that response. Like the other questions, you can see a serial display of



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all student responses by using the icon.



Customized Reports

From the summary page you can create a customized report by selecting questions using the check-boxes. Check off the questions you want to focus on, and then press the **show selected** button. You can then print the filtered summary report.

Report for: Earth Science

Show all

Show selected

print this | print all users

Is there life in space? 2011-2012 (all | none)

Activity (all | none) – The Vastness of Space

Section (all | none) – A Lot of Stars...

Page (all | none) – Are We Alone?

How do planet hunters use light from distant stars to find planets? Give two examples from the video.

Hide responses

Answered 2

Skipped 0

Total 2

Linus Van Pelt

but looking at light can see movement of the star. which means planet might affect it

Lucy Van Pelt

look for eclipse and change in colore

Why is finding other planets difficult?

show responses

Answered 2

Skipped 0

Total 2

Scientists are looking for Earth-like planets. According to the video, what makes a planet suitable for life?

Hide responses

Answered 2

Skipped 0

Total 2

Linus Van Pelt

water and carbon.

Lucy Van Pelt

water



Student Login Experience

Student registration

AA student will need to go the same portal to login as you. Have them go directly there by clicking here: <http://has.portal.concord.org/>

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Username

Password

[Forgot login?](#) | [Register](#) [GO](#)

[HOME](#) | [ABOUT](#) | [BROWSE INSTRUCTIONAL MATERIALS](#)

SEARCH [GO](#)

High-Adventure Science Investigations are online, multi-activity interactive lessons based around an unanswered question in Earth and Space Science.

Each investigation includes real-world data, interactive models, a video of a scientist working in the field, and a series of "certainty-explanation" item sets designed to help students craft cogent scientific arguments based on the evidence. All materials are free and open-source!

- [Browse](#) and try instructional materials for your classroom
- [Register](#) for free teacher support materials and student progress reports.

[Browse All Materials](#)

High-Adventure Science lets students explore frontier science in the middle- and high-school classroom.

Climate Change

How much will human-derived greenhouse gases affect Earth's temperature in the future? Scientists don't yet know the answer, but they're actively investigating this topic.

Use computational models to learn how greenhouse gases increase atmospheric temperature, and learn about the positive and negative feedback loops that interact to determine Earth's temperature.

["What will Earth's temperature be in the future?"](#)

If they are first time users they will need to click on the Register link in the top corner of the page. Then click "Sign up as a student" button.

Sign Up

[Sign up as a teacher](#)

[Sign up as a student](#)

They will then need to complete the form below. You will need to give the students the class "word" the one you gave to the class. (See page @@@)

Each student will also need to complete the three unique questions (to help students incase they forget their password.)

Then click the submit button.

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Student Signup

First Name:

Last Name:

Password:

Password Again:

Class Word:

(Not case sensitive)

Please select three questions from the menus below.

If you forget your password, you will need to answer these questions correctly in order to receive a new one.

Question	Answer
First Question: - Please select a question	<input type="text"/>
Second Question: - Please select a question	<input type="text"/>
Third Question: - Please select a question	<input type="text"/>

If successful they will see the following message:

Success!

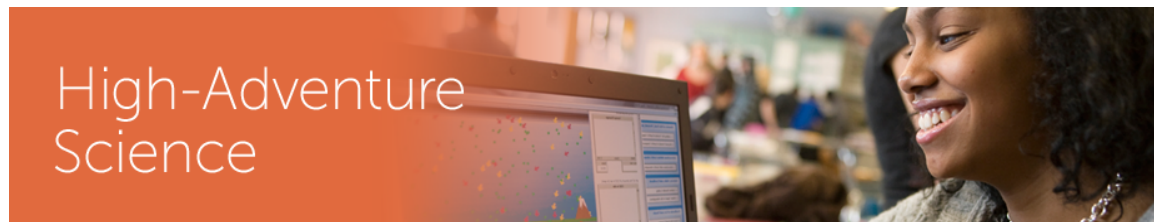
Your username is: **lbennett**

Write down your username in a safe place! You will need to login with this username and the password you provided in order to access your class.

Students will need to then login into the portal, by entering there username and password in spaces at the top right of the page.

Student homepage

When a student logs in s/he will see all the activities you have assigned as well as an at a glance overview of what work has been completed on each activity. Students can see whether or not they started the investigation. Each investigation will state "You haven't started this yet" or it will have a progress bar showing light orange (in progress) or dark orange (complete). Students are given the choice of running an activity by himself or running it with another user. Also note that a student can generate a report of his or her own work by clicking on the text "Generate a report



of my work.” The report will popup as a new window. This report is printable.

Logged in successfully

Earth Science
Environmental Science 101

Classes and Offerings:
Earth Science Amiee Pallant
Investigation: NATURE OF SCIENCE SURVEY 2011-2012
Collection of demographic and Nature of Science questions.

Run by Myself
Run with Other Students

Last run Feb 06, 2013

▶ completion

[Generate a report of my work](#)

Investigation: PRE-TEST LIFE IN SPACE 2011-2012
To be given before implementing the "Is there life outside of Earth?" investigation.

Run by Myself
Run with Other Students

Last run Sep 27, 2012

▶ completion

[Generate a report of my work](#)

Investigation: IS THERE LIFE IN SPACE? 2011-2012

Run by Myself
Run with Other Students

Last run Sep 28, 2012

▶ completion

[Generate a report of my work](#)

Investigation: POST-TEST LIFE IN SPACE 2011-2012
To be given after implementing the "Is there life outside of Earth?" investigation.

Run by Myself
Run with Other Students

not yet started
You haven't started this yet.

If they click the “Run by Myself” button , then they should see new text appear below the title:

Investigation: PRE-TEST LIFE IN SPACE 2011-2012
To be given before implementing the "Is there life outside of Earth?" investigation.

⚙️ **Activity launcher delivered. Activity should be opening...**

▶ completion

[Generate a report of my work](#)

Once the activity is launched that red message will turn green and say:

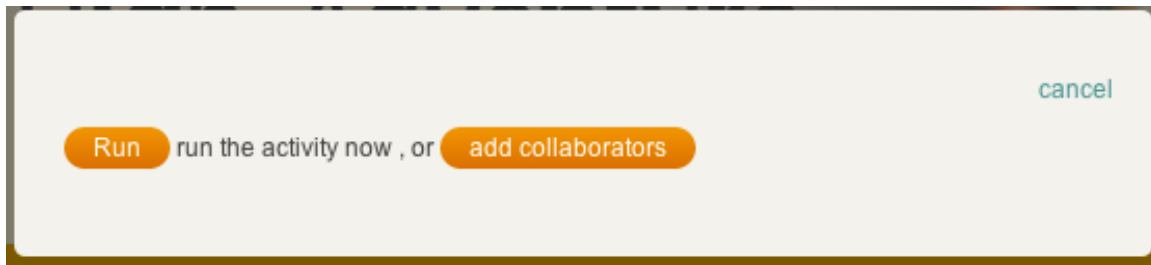
Activity content loaded. Activity should now be running...

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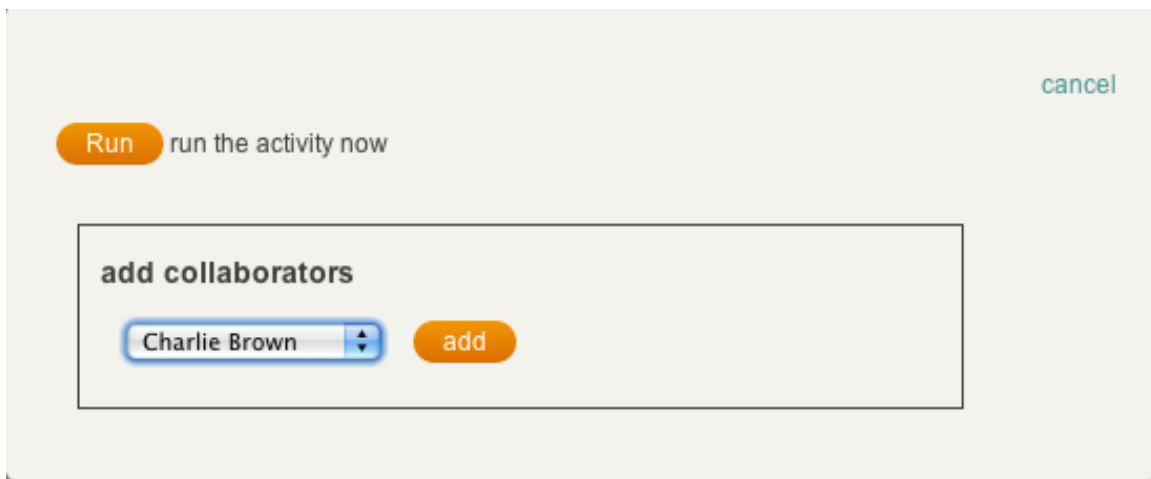
Understanding Dynamic Workgroup Formation

Forming workgroups

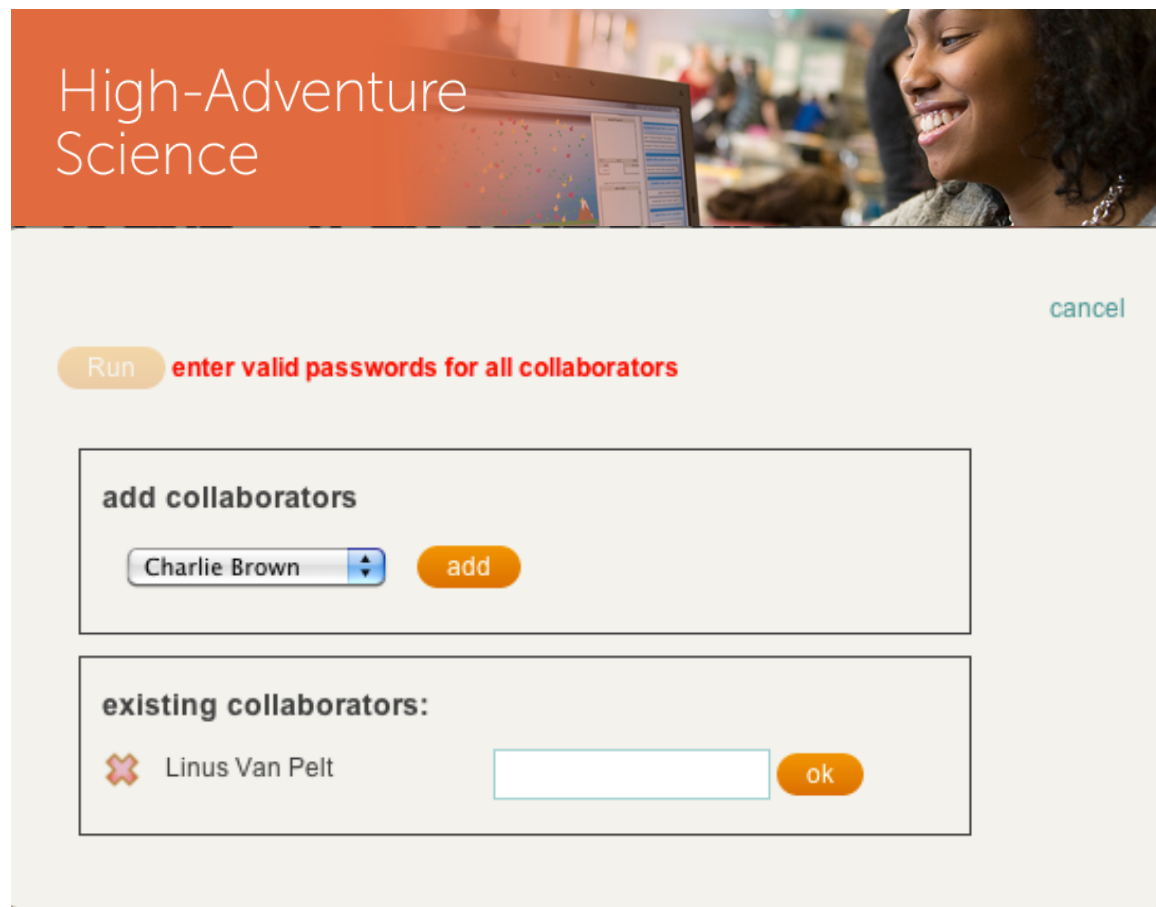
When a student logs in they will be asked if they would like to run the activity alone or if they want to add collaborators.



If they choose to add collaborators they will be shown the following dialog box:



The **pull down** menu will contain a list of all students in their class. For each student who is added, the proper password is needed for that student to join the workgroup.



Any number of students may be added as collaborators, but it is recommended that no more than three students form a workgroup (with two students – the one launching the activity and a single collaborator – being optimal).

When the investigation is closed all students included in the workgroup will get copies of the data from this last session, overwriting any previous data they might have had.

Implications for data loss

The dynamic workgroup formation allows for students to easily form groups without the teacher needing to manage this. It also allows students to start together and finish individually if there is no time to finish the investigation during the class time allotted. However, because of the way data is managed there is the possibility of data loss, so both students and teachers should be aware of this.

The easiest way to prevent data loss is to make sure a group stays together once a group is formed during the first run of an investigation. You may want to change groups around, or have students work individually, and that is fine, but you should be aware of the implications of how data is managed and what to expect when certain paths are chosen. Below are some common patterns and an explanation of how data is managed in each scenario.

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- A. Students start as a group and finish individually:** In this case there is no data loss. Each student will have identical answers for the group work done together, and their own individual answers for the portion of the investigation they completed on their own.
- B. Students start as a group, one or both of them continues work on their own at home, and then resume working together at a later time:** Let's assume this is a pair of students – Student A, and Student B. This breaks down into three sessions.
1. *Session 1:* The students work together on the first part of the activity and leave class with identical data.
 2. *Session 2:* Student A and Student B continue working individually at home, giving each student a unique set of data.
 3. *Session 3:* Student A and Student B come back together. If Student A launches the activity and adds Student B as a collaborator, they will start with Student A's data and Student B's data will be overwritten when the activity is closed. The reverse is true if Student B launches the activity and adds Student A as a collaborator, losing the work done at home by Student A.
- C. A student starts with one group and moves to another group:** There may be reasons you need to move a student from one group to another. In that case someone will lose data. Let's assume two groups, one containing Students A and B, and another containing Students C and D.
1. *Session 1:* Each pair works on their own, generating data for each pair of students in each group.
 2. *Session 2:* Student A is moved to the group which already has Students C and D. Two things can happen in this session. If Student A launches the activity and adds C and D, then they will all start this session with A's previous work, overwriting the work C and D did together. Or, either C or D could launch the activity and add Student A. In this case Student A's work would be overwritten with the work of C and D, plus whatever new work this group does together.
- The patterns above reinforce the following points:
- The data students start with in any particular session will be the data from the previous session of the student launching the investigation.
 - Closing the investigation window copies all current data to all members of the current workgroup.
 - If students are intended to work together as a group, they should not do any individual work unless they have completed working together as a group for that entire investigation.
 - Moving a student from one group to another will involve data loss. The newly formed group will start with the data from the last session of whoever launches the investigation.

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Navigating an Investigation

A walk through an investigation

An **Investigation** contains several days worth of related assignments. Each day is represent by an **activity**. Each activity has on or more **sections**, and each section has one or more **pages**.

On the left side is a hide-able navigation menu showing each activity and sections within the activity. *It is recommended that once you begin an activity that you hide the navigation menu to the left to give more space of the activity pages.*

Use the circles (or arrows to the left and right of the circles in the lower right of the screen to go from page to page.

The screenshot shows the 'Modeling Earth's Climate' investigation interface. On the left is a navigation menu with expandable sections: 'Climates of the Past, Present, and Future', 'Interactions Within Earth's Atmosphere', 'Sources, Sinks, and Feedback', 'Feedbacks of Ice and Clouds', and 'Experimenting With the Climate Model'. The first section is expanded, showing activities like 'Looking for Trends in Earth's Temperature'. A red banner at the top left states: 'You are not logged in as a student. Your data will not be saved.' The main content area displays the 'Looking for Trends in Earth's Temperature (Climates of the Past)' section. It includes a title, a question 'What will Earth's climate be in the future?', and introductory text about climate change. Below the text is a world map titled 'Annual J-D 1881-1890 L-OJ(°C) Anomaly vs 1951-1980 -27' showing temperature anomalies. At the bottom right, there are navigation controls: a set of five circles (the first is red) and arrows to navigate between pages. A status bar at the very bottom indicates 'File saved'.

Annotations on the screenshot:

- click on the small triangles to show/hide nav bar (pointing to the expand/collapse triangles in the navigation menu)
- a section of an activity (pointing to the 'Looking for Trends in Earth's Temperature' activity in the navigation menu)
- an activity (pointing to the 'Looking for Trends in Earth's Temperature' activity in the navigation menu)
- each circle represents one page of a section (pointing to the navigation circles at the bottom right)