

6th Grade Science Syllabus for Virtual Learning

<u>Teachers and Subjects</u>	<u>Contact Information</u>
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Goal

It may seem like a long way out, but college is just around the corner. 6th grade marks the beginning of middle school, then in three years comes high school, and after high school students will have options with what they choose to pursue next in their lives. Our goal for 6th grade is to work hard every day in order to pursue whatever each student chooses to do after high school, whether it be attending trade/technical school, getting a job, or going to college. These life decisions do not have to be made now, but the hard work and skills needed to pursue these goals starts right now. All students will come into 6th grade with different abilities, but please keep this in mind: it doesn't matter how much or how little a student knows coming into the year, the only thing that matters is how much personal growth they have made by the end.

Overview

6th Grade is the first year of middle school for students at Hampstead Hill Academy. In middle school, the expectations are higher and the workload is heavier than anything students have experienced before. Some students may experience some difficulties during the "transition time" into middle school. There will be resources available to help students succeed in 6th grade including after school coach classes, study hall and independent tutoring sessions; however students are responsible for seeking out these resources.

Ongoing Communication

It is important to me, to select and establish ongoing communication and work in a partnership with all of my students and their families. In order to do this, the following classroom specific forms of communication will occur throughout the year in order to keep all families updated about their child's progress.

1. **Bloomz:** Bloomz is HHA's school wide primary form of communication. Bloomz is a classroom communication app used to share reports between parents and teachers. It connects parents and teachers on a student's conduct and performance through real-time reports as well as a class story board for photos and videos during the school day. Every student has received a Bloomz account and every parent also needs to sign-up for an account, if you haven't done so already. You may download the app, or access the website on any device that has internet connection. Bloomz also allows you to set your preference on whether you receive communication via text, email, and/or alerts. Please feel free to reach out if you need help setting up an account!

You can access Bloomz at: <https://www.bloomz.net/>

2. **Google Guardian Summary:** You can be added to your student's Google classroom account as their guardian. You will then automatically be sent weekly Google Summaries, which includes their completed work.
3. **HHA News Magazine:** Each month, you will receive a Hampstead Hill News Magazine. Look for the 6th grade science section to get updates on all that we've been learning in the past month. There will also be some great academic conversation starters so your student can show you all they've learned!

Supplies Needed for Virtual Learning

- Desktop, Laptop, or Chromebook
- Reliable Internet Connection
- White board
- Dry erase markers
- Pencils
- 1 Green spiral notebook (Science)
- 1 College Ruled Composition Notebook (Math)

Optional, but Recommended:

- Headphones w/ a Microphone
- Highlighters
- Multi-colored pens or pencils
- Ruler
- Sticky Notes

Schedule

	Blue Jays 601	Jumbos 603	Broncos 602
9:00-9:30	Homeroom		
9:30-10:30	Humanities	Math	Science
10:30-11:30	Math	Science	Humanities
11:30-12:15	Lunch Break		
12:15-1:15	Science	Humanities	Math
1:15-2:05	Independent Work Time Teacher Office Hours		
2:10-2:50	Resource	Resource	Resource

Rules

There are three basic and simple rules that govern middle school classrooms whether in-person or virtual:

- 1.) Respect each other
- 2.) Respect yourself
- 3.) Respect your environment

Virtual Learning Norms

1. Login daily! Please remember to check your email and Google Classroom at the beginning of each morning.
2. Read all instructions on Google Classroom and each assignment.
3. Plagiarism is unacceptable. Any work submitted that is not your own will result in a zero.
4. Always use appropriate and academic language when communicating with staff and students.
5. Complete work on time and to the best of your ability. Feel free to ask questions via Bloomz.

Zoom

1. During our class time, please sign in with your real full name and turn your video on! It's important to see your face so we can create a connection between you and your name. We want to make sure that we can continue to build our relationships throughout a year. If there is a specific concern or you do not have a device with video access, please contact your homeroom teacher for support.
2. During our class time, we want to make sure that we can hear from you! If you have an answer to a question or want to speak, please use the "raise your hand" feature through Zoom. For more information on how to do that, check out this [helpful video](#).
3. We want to make sure that we're keeping our Zoom classes as professional as possible! Please make sure you're wearing appropriate attire during our class time. Some simple rules are:
 - a. No pajama-type attire, undershirts or other bedtime attire is allowed during the school day or during school-sponsored activities.
 - b. Apparel with vulgar statements or statements promoting illegal drugs, alcohol, sex, violence, or gangs is not allowed.
 - c. No undergarments worn as outerwear are allowed. Clothing should be worn so that undergarments, including boxer shorts, thongs, or bras, are not exposed.
4. Just a reminder that all Zoom classes will be recorded. This will allow missing students to be able to gain access to instruction as well as support students who might need it. Please contact your homeroom teacher with any additional questions. We will be posting a link to the Zoom Cloud with recordings at the end of each day.
5. All zoom links and schedules will be posted on your Google classroom. Please allow a five-minute window for tech issues and software updates to make sure you're on time for class!

Absence Policy for Virtual Learning

Students who miss a Zoom class due to an excused absence should email their teacher to receive a recording of the online class. Because our Zoom recordings expire after 7 days, students will only have a week to complete any assignments they miss when they are absent. For this reason, students should be sure to email their teachers as soon as possible if they miss a class so that they have enough time to view the recording and complete their missing assignments. As with in-person school, students need to be sure to make up ALL assignments that they miss, which may include warm ups, notes, independent work, exit tickets, and assessments.

Student Behavior and Consequences

Students are expected to behave in accordance with the classroom rules. Failure to follow the rules will result in specific consequences that are consistent with the consequences for Hampstead Hill Academy.

Leaders Go Places

Hampstead Hill Academy's Leaders Go Places is a middle school program designed to promote scholarship, citizenship and leadership. Each quarter students will have the opportunity to work towards a leadership level by earning good grades, completing two or more hours of service learning as well as maintaining good attendance, work ethic and behavior. These components will determine whether a student is eligible for a particular leadership level – bronze, silver, gold or platinum. Hard work will be rewarded in many ways!

Grading

Grades are weighted in the following categories:

- Classwork (60%)
- Assessments (30%)
- Participation (10%)

Portfolio Projects

At the end of each unit students will be completing a virtual culminating project to demonstrate their knowledge of the content covered within the unit. At the completion of the year students will have four portfolio projects.

Science Content

In 6th grade with Mrs. Poole, students will learn how to think, act and speak like scientists. Students will use the program called IQWST (*Eye-Quest*), which stands for Investigating our World through Science and Technology. In science class students will use an interdisciplinary approach, including aspects of physics, earth science, geography, mathematics, chemistry, and biology to enhance their knowledge of the scientific world. Some of the specialized areas which students will cover this year include:

Quarter One: Unit 1- Physical Science: Can I Believe My Eyes?

The unit begins with a contextualizing activity in which students view optical illusions that make them uncertain of what they are seeing. They spend the next several weeks investigating light waves and their interaction with matter. To do so, students engage in several scientific practices, with an emphasis on constructing and using models to explain and predict phenomena. Each new investigation causes students to realize that the model they developed to fit one situation does not fit the new one, requiring revision based on new evidence. This practice enables students to engage in modeling in ways similar to those in which scientists develop, use, and revise models they use to explain and predict real-world phenomena. Students continually delve into core science ideas, gaining a deeper understanding of how light moves through space, what happens when it meets matter, how eyes detect light, how colors of light can be perceived, and that some light is non-visible. A conceptual understanding that “light can make things happen” sets the stage for understanding energy, a crosscutting concept revisited in future IQWST units in physics, chemistry, life science, and Earth science and central to all future science learning.

Quarter Two: Unit 2- Introduction to Chemistry: How Can I Smell Things from a Distance?

In order to contextualize core ideas about the nature of matter, this unit focuses on the everyday life experience of smelling odors whether close to or far from one's nose. As students investigate this and other phenomena, they

develop models of how people smell odors, and use their models to explain and predict what happens in various scenarios. Rather than simply accepting a particle model (that matter is comprised of molecules, which are comprised of atoms), students come to understand this core science idea over time as the only way to explain that air can be compressed, expanded, added to and subtracted from a container. Students then use the particle model to explain why substances have different properties, and to explain the behavior of particles in each state of matter and at a substance's melting and boiling points during phase change, including the relationship between the movement of molecules and temperature. Students' model of matter, which is represented both as a drawing and a written explanation, represents a conceptual understanding that "all matter is made of particles in constant motion," a concept revisited in future IQWST units in physics, chemistry, life science, and Earth science and central to all future science learning.

Quarter Three: Unit 3- Life Science: Where Have All the Creatures Gone?

This ecosystem unit focuses on organisms' needs for survival and what happens when those needs are not met. Throughout the unit, students investigate a specific population change: the decrease in the trout population in the Great Lakes from 1930 to 1990. Because the sea lamprey, as an invasive species in the Great Lakes, is such a fascinating organism, this particular case of population change engages students in learning core science ideas that they can then apply to changes in their local environments or elsewhere. Over the course of their investigation, students learn why food is important, what structures different organisms have in order to eat and reproduce, what the possible relationships are between organisms (e.g. competition, predator/prey, producer/consumer) and what abiotic factors affect ecosystems. All of these pieces help students to invest in developing an evidence-based scientific explanation and engaging in argumentation about why the trout population decreased so dramatically, employing a key scientific practice as they learn core science ideas.

Quarter Four: Unit 4- Earth Science: How Does Water Shape Our World?

To contextualize core ideas about the water and rock cycles at the middle school level, this unit focuses on selected national parks in the United States and the study of features common and unique to each. In groups, students take on the task of collaborating to develop a visitors' guide that explains how water has shaped the landscape of a single park. To complete this task, students must understand how water moves through the park, what types of rock are present, and how the water and rock have interacted to shape the land. Students learn where water can be found on, above, and below the Earth's surface. They learn how water moves and is transformed in the water cycle by investigating evaporation, precipitation, infiltration, and flow. Students also explore how rocks are formed and the properties of different types of rock. Finally, they examine the effects of water on the land by investigating weathering, erosion and deposition. To do so, students engage in relevant scientific practices, address crosscutting concepts, and build understanding of energy and the particle nature of matter as both apply in the study of Earth science.

Digital Science Workbook

Science workbooks will be a significant part of each student's daily grade in science class. Throughout each unit students will be asked to utilize a digital science workbook. Workbooks will document students' learning progress, demonstrate their scientific knowledge, and serve as a tool to track daily participation. When recording ideas, students should always write in complete and detailed sentences. Students can log-in to their electronic science workbook from any computer or tablet.

To access student workbooks, the students will log-in by visiting:

<https://hampsteadhill.iqwst.com/webapp/index.html#login>

Science Journal

Each student needs a green spiral notebook. This notebook will be used to record science vocabulary, scientific principles and key ideas. Science journals should be kept in student binders and be brought to virtual class every day. Science journals are a great tool for studying for tests!

Participation

Students will be expected to actively participate in all virtual class discussions, activities and labs. Class participation is the student's opportunity to contribute to the class and a chance for them to show the teacher that they have been paying attention and are learning.