



## Science 8

### Course Overview

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Course Web Page: [classroom.google.com](https://classroom.google.com)

### About the Course

Grade 8 Science takes students on an exploration of questions related to issues facing Nepal today; through those questions students explore major themes and topics from the main disciplines of science.

This course provides an in-depth look at experimental design with focus on variables and controlling sources of error in experimentation, to help develop a broader and more analytical understanding of the world around us. Students will continue to develop their proficiency with the scientific reporting process with focus on language and voice as well as their ability to use sophisticated scientific tools.

### Course Structure

Students in Grade 8 Science will explore three main questions about Nepal: How is Nepal affected by climate change, Why is Nepal vulnerable to earthquakes, and What makes us human?

The course is structured around a central strand that is explored through the essential questions that frame each unit. Grade 8 will examine the concept of *matter, motion and energy* throughout this year and this core strand will link units of study.

Major concepts and themes explored in Grade 8 include:

- Phases of matter, Increases and decreases of energy, global weather systems, heating and cooling of gases, climate change, glaciation
- Waves and wave motion, sound waves vs earthquake waves
- Architecture and designing earthquake resistant buildings
- Heredity, genetics and reproduction

### Assessment

Students' progress is assessed through classwork, lab reports, projects and assignments. Students will regularly conduct experiments and complete formal lab reports to explain their process and findings. These reports will sometimes take on alternative forms such as video or podcast reports.

Each student in grade 8 will also design and conduct an independent scientific experiment for inclusion in the Middle School Science Fair that takes place in the 3<sup>rd</sup> quarter of the year. Students will also be expected to take an active role in online discussions related to the concepts we are exploring in class.



**Course Texts:**

There is no one text book for this class however students will make use of supplementary texts as well as online resources which will be delivered through the course website.

Students require a notebook to keep class notes and rough information related to experimental results and procedures. They should also bring a pencil and pen with them to each and every class.

Students are also expected to bring their laptop with them to each and every class. The laptop should be charged and ready to use.