

High School Science - Distance Learning Resources

Welcome! In light of the COVID 19 pandemic and school closures, we have worked with our partnering districts to create and curate remote supplemental learning resources for students. These resources will be posted soon on the pdxstem.org website.

The following resources were developed by district science TOSA teams and the Portland Metro STEM Partnership (PMSP) Physics, Chemistry, and Biology Councils. These Councils represent curriculum development leads and master HS teachers from Beaverton, Hillsboro, and Portland Public. Thank you, district science leaders and PMSP Content Council leaders, for developing this set of supplemental learning resources for high school students!

Background: The Patterns High School Science Sequence is a three year course pathway and curriculum aligned to the Next Generation Science Standards (NGSS). The sequence consists of freshman physics, sophomore chemistry, and junior biology courses.

How to Use:

- **NGSS alignment** information for each unit can be found on the first page of the virtual resource google documents.
- **Student calendars** are available to the public. **Teacher calendars** require permission to view to maintain security for the answer keys.
- Students may use **either** the virtual resource **or** the print resource. There is no need for students to access both.
- **Timeline** - We will update the pdxstem.org website as resources in development become available. Please find additional timeline notes below.
- **Print Packet** - A 20-page (10 sheet) packet has been or will be produced for each unit. Numerous Portland Metro STEM partner districts plan to print these resources and distribute them via nutrition centers during the school closure.
- **Professional Development** - A webinar will be offered for each unit that provides an overview for interested educators and TOSAs. Please review page 3 of this overview.

Physics

Unit 1 Patterns Unit:

- [Distance Learning Teacher Calendar](#)
- [Student Calendar](#)

- Student Paper Packet (coming soon)

Unit 2 Texting & Driving:

- [Distance Learning Teacher Calendar](#)
- [Student Calendar](#)
- Student Paper Packet (coming soon)

Units 3 and 4 will be released in the fall

Unit 5 Waves and Technology:

- [Teacher Calendar](#)
- [Student Calendar](#)
- [Student Paper Packet](#)

Unit 6 Electricity, Power Production, and Climate Science:

- [Teacher Calendar](#),
- [Student Calendar](#)
- [Student Paper Packet](#)

Chemistry

- [Unit 1: KMT and Climate Change Teacher Calendar](#) - and [paper packet](#)
- [Unit 2: Atoms and the Periodic Table Teacher Calendar](#) - and paper packet
- [Unit 3: Nuclear Chemistry Teacher Calendar](#)
- [Unit 4: Bonding and Intermolecular Forces Teacher Calendar](#) and Paper packet
- [Unit 5: Chemical Reactions Teacher Calendar](#) and Paper Packet
- [Unit 6: Stoichiometry Teacher Calendar](#) and Paper Packet

Biology

- [Unit 1: Ecosystems and Biodiversity Teacher Calendar](#) - and [paper packet](#)
- [Unit 2: Biomolecules Teacher Calendar](#) - and [paper packet](#)
- [Unit 3: Cells to Organisms Teacher Calendar](#) - paper packet coming soon
- [Unit 4: Genomics Teacher Calendar](#) and Paper Packet
- [Unit 5: Evolution Teacher Calendar](#) and Paper Packet

“High School Science for All” (<https://www.pdxstem.org/hs-science>)

[There will be an “alert” button on the HS Science page and on the homepage of pdxstem.org that folks can click on to go to this new remote learning page.]

As noted above, additional resources are in development. We will continue to update this document.

Distance Learning Professional Development Opportunities

Need help with teaching high school science in a distance learning setting? We are here to help! Below are opportunities to learn about the resources we have for each course, how to facilitate learning remotely to promote engagement and student success, and how to flexibly and inclusively provide assessment opportunities to students.

Each session will focus on one unit in the second semester of a single course and will include the following topics:

- A review of the remote learning resources and assessments for the unit of focus for that session
- Strategies to engage students in the science and engineering practices from home.
- Strategies to provide formative feedback, as well as flexible and inclusive summative assessments
- Time for Q&A and collaboration

Professional Development Information can be Found Here

The PD schedule is in development now and will be posted here when ready.