



Science eLearning Guide – Week 7

Biology: [Animal Systems Part 3](#)

- Students will describe the interactions that occur among systems that perform the functions of transport, reproduction, and response in animals.
- Students will analyze the levels of organization in biological systems and relate the levels to each other and to the whole system.

Chemistry: [Acids & Bases](#)

- Students will define acids and bases, distinguish between Arrhenius and Bronsted-Lowry definitions, and predict products in acid-base reactions that form water.

Physics: [Quantum Wave Behavior](#)

- Students will describe the photoelectric effect and the dual nature of light.
- Students will compare and explain the emission spectra produced by various atoms.

IPC: [Reviewing Chemical Bonding](#)

- Students will review content such as relating the placement of an element on the Periodic Table to its physical and chemical behavior including bonding.

Biology - WEEK 7

Objectives

- Students will describe the interactions that occur among systems that perform the functions of transport, reproduction, and response in animals.
- Students will analyze the levels of organization in biological systems and relate the levels to each other and to the whole system.

Note: Beginning the week of April 14 and in alignment with our Adjusted Grading Guidelines, teachers in grades 6-12 may assign student work from the Digital Backpack eLearning guide, or from the teacher's itsLearning course, for a grade.

For Parents

- Please make sure your student has access to the internet and a technology device.
- If able, please print: this circulatory & respiratory system [note guide](#); and this immune system [note guide](#)

For Students

- Explore the human circulatory & respiratory system structures using this [interactive](#): tinyurl.com/ydae2u8g
- Learn about the functions of the respiratory & circulatory systems with this [presentation](#): tinyurl.com/y475v6
Use this [note guide](#) to take notes: tinyurl.com/ydbfzszm
- Explore the immune response system with this [interactive](#): tinyurl.com/yarebaz3
- Learn about the immune system functions with this [presentation](#): tinyurl.com/y7yeggbs
Use this [note guide](#) to take notes: tinyurl.com/yb3umbyf
- [Read](#) about what you can do to mitigate COVID-19: tinyurl.com/ybe7owLg

AP Resources:

- Continue with the following:
 - Take the diagnostic test for AP Biology and proceed through drills and practice based on your results. [Log in directions](#)
 - Find the corresponding [Bozeman Science video tutorials](#) for the areas you need support.
- Continue, as applicable, with the review at:
<https://apstudents.collegeboard.org/coronavirus-updates>

Resources

- Crash course [video](#) on the Respiratory & Circulatory systems: tinyurl.com/y92uu3z7
- Crash course [video](#) on the Immune system: tinyurl.com/ybuczv5

Chemistry - WEEK 7

Objectives

- Students will define acids and bases, distinguish between Arrhenius and Bronsted-Lowry definitions, and predict products in acid-base reactions that form water.

Note: Beginning the week of April 14 and in alignment with our Adjusted Grading Guidelines, teachers in grades 6-12 may assign student work from the Digital Backpack eLearning guide, or from the teacher's itsLearning course, for a grade.

For Parents

- Please make sure your student has access to the internet and a technology device.
- If able, please print: this lab [guide](#); this [worksheet](#); and this [worksheet](#)

For Students

- Watch this [video](#) to introduce the concept of acids and bases: tinyurl.com/ycrgvb7L
- Explore acids and bases with this [virtual lab](#): tinyurl.com/yd8drzxk
Use this lab [guide](#) to help you: tinyurl.com/ybL8ykkc
- View this [presentation](#) on acids & bases: tinyurl.com/y7cc6hy6
Use this [noteguide](#) while reviewing the presentation: tinyurl.com/yd2qzkc2
- Practice identifying acids and bases with this [worksheet](#): tinyurl.com/yaz6j3f8
- Practice naming acids with this [worksheet](#): tinyurl.com/yd45mygw

AP Resources:

- Continue with the following:
 - Take the diagnostic test for AP Chemistry and proceed through drills and practice based on your results. [Log in directions](#)
 - Find the corresponding [Bozeman Science video tutorials](#) for the areas you need support.
- Continue, as applicable, with the review at:
<https://apstudents.collegeboard.org/coronavirus-updates>

Resources

- TEDed Talk on acid and base (and their strengths) [tutorial](#): tinyurl.com/ycv6nkyw
- Naming acids [tutorial](#): tinyurl.com/y76m7av4

Physics - WEEK 7

Objectives

- Students will describe the photoelectric effect and the dual nature of light.
- Students will compare and explain the emission spectra produced by various atoms.

Note: Beginning the week of April 14 and in alignment with our Adjusted Grading Guidelines, teachers in grades 6-12 may assign student work from the Digital Backpack eLearning guide, or from the teacher's itsLearning course, for a grade.

For Parents

- Please ensure your student has internet access and a technology device.
- If able, please print: these [questions](#); this [page](#); and this [concept check](#)

For Students

- Watch this [*video \(tinyurl.com/vh4uzj7\)](https://www.tinyurl.com/vh4uzj7) while using these [questions](#) as guidance: [tinyurl.com/DrQquestions](https://www.tinyurl.com/DrQquestions)
**Note: This content can be particularly confusing, so it is OK to feel like you do not understand it the first time. There will be more opportunities to get clarity, so if you still struggle by the end of the lesson sequence, please visit the resources at the bottom.*
- Read and answer the questions on this [page: tinyurl.com/thuz7h8](https://www.tinyurl.com/thuz7h8)
- Explore the concept of the photoelectric effect [here: tinyurl.com/tec5r7w](https://www.tinyurl.com/tec5r7w)
Be sure to read through the entire introduction before exploring the "feature" tab. Follow the experience by checking your understanding.
- Read through this [slideshow](#) on quantum wave mechanics: [tinyurl.com/y8ynebpb](https://www.tinyurl.com/y8ynebpb)
- Check your understanding with this [concept check: tinyurl.com/y9k55bnk](https://www.tinyurl.com/y9k55bnk)

AP Resources:

- Continue with the following:
 - Take the diagnostic test for AP Physics and proceed through drills and practice based on your results. [Log in directions](#)
 - Find the corresponding [Bozeman Science video tutorials](#) for the areas you need support.
- Continue, as applicable, with the review at:
<https://apstudents.collegeboard.org/coronavirus-updates>

Resources

- Wave-Particle Duality [tutorial: tinyurl.com/y9uwn8a](https://www.tinyurl.com/y9uwn8a)
- The quantum mechanics of an electron [tutorial: tinyurl.com/ydhfgty2](https://www.tinyurl.com/ydhfgty2)
- The Quantum Experiment that Broke Reality [video \(PBS\): tinyurl.com/jax74sf](https://www.tinyurl.com/jax74sf)

IPC - WEEK 7

Objectives

- Students will review content such as relating the placement of an element on the Periodic Table to its physical and chemical behavior including bonding.

Note: Beginning the week of April 14, and in alignment with our Adjusted Grading Guidelines, teachers in grades 6-12 may assign student work from the Digital Backpack eLearning guide, or from the teacher's itsLearning course, for a grade.

For Parents

- Please be sure your student has internet access and a technology device.
- Please print, if able: this [choice board](#) and this comic [template](#) (if selected as a choice activity)

For Students

- Review the differences between ionic and covalent bonding [here](http://tinyurl.com/tLeucg4): tinyurl.com/tLeucg4
- Go into depth with this animated concept [module](http://tinyurl.com/ug9qvc2): tinyurl.com/ug9qvc2
- Choose three options from the Chemical Bonds [choice board](#) to complete: tinyurl.com/whdd8ya

Resources

- Ionic vs Covalent bond [tutorial](http://tinyurl.com/u3ehwzc): tinyurl.com/u3ehwzc
- 6-panel comic [template](http://tinyurl.com/t47w3sn): tinyurl.com/t47w3sn