



Course: Honors Physics

We hope that you, your families and loved ones are well! During the COVID-19 pandemic school closure, we will be doing our best to provide you engaging activities that will enrich your understanding of Physics. During term 4, you will primarily be exploring forces and energy, specifically as they relate to electricity.

| Goal for this week |
|--|
| <p>Learning Objectives: Students will be able to ...</p> <ol style="list-style-type: none"> 1. understand how voltage, current and resistance are intrinsically related to power. 2. to solve for current, voltage using Kirchoff's loop rules. 3. identify elements of electric circuits and solve for voltage, current, and resistance by analyzing them. <p style="text-align: right;"><i>[2016 MA STE Standard: HS-PS2-9(MA)]</i></p> |
| <p>Literacy Objectives:</p> <ol style="list-style-type: none"> 1. Reading: to understand a concept and construct meaning 2. Writing: to generate a response to what one has read, viewed, or heard 3. Reasoning: to compute, interpret and explain numbers <p style="text-align: right;">https://www.bpsma.org/schools/brockton-high-school/about-us/mission-literacy-charts</p> |

| |
|--|
| <p>Lesson:</p> <ul style="list-style-type: none"> • <i>Your science teacher will be in contact to clarify expectations (like when and how to submit your work for credit) for your class.</i> • Click on the links to view the resources. |
|--|

WHY THIS MATTERS

The electric charge that flows through your house is called your electric circuits. This system carries useful energy that you can use for a variety of appliances, computers, etc. Circuit diagrams are a pictorial way of showing circuits. Electricians and engineers draw circuit diagrams to help them design the actual circuits. Being able to read them will help you understand how they work and help [diagnose problems](#) if a device is broken.

Topic: Electric Power and DC circuits

| Day | What to do ... |
|-----------|---|
| Monday | Watch Khan Academy video on electric power (10 min) and do the 7 practice problems on characteristics of circuit diagrams (20 min). |
| Tuesday | In Khan's academy read DC circuits and electric power review article (15min) and then complete the 4 problems related to calculations from circuit diagrams (15 min). |
| Wednesday | In Khan Academy watch Kirchoff's voltage law video (6min) and then complete the 4 Kirchoff's loop rule symbolic problems (15 min). |
| Thursday | In Khan Academy read review article on Kirchoff's loop rule lesson (15 min) and then do the 4 practice Kirchoff's loop rule calculations (15min). |
| Friday | Complete the Kirchoff's laws worksheet (30 min). |

WEEKLY REMOTE LESSONS

June 1-5, 2020

BROCKTON HIGH SCHOOL
SCIENCE DEPARTMENT



Additional Support

Email:

- Please reach out to your science teacher with specific questions about the lesson.

Office Hours:

- Here is a list of the [science teachers' office hours](#). Please email your teacher to set up meeting times.

Other questions:

- Science Department Head
Dr. David Mangus
davidmangus@bpsma.org