

Simulatio Based Laboratory (SBL)

Hukum Ohm

1. Tujuan

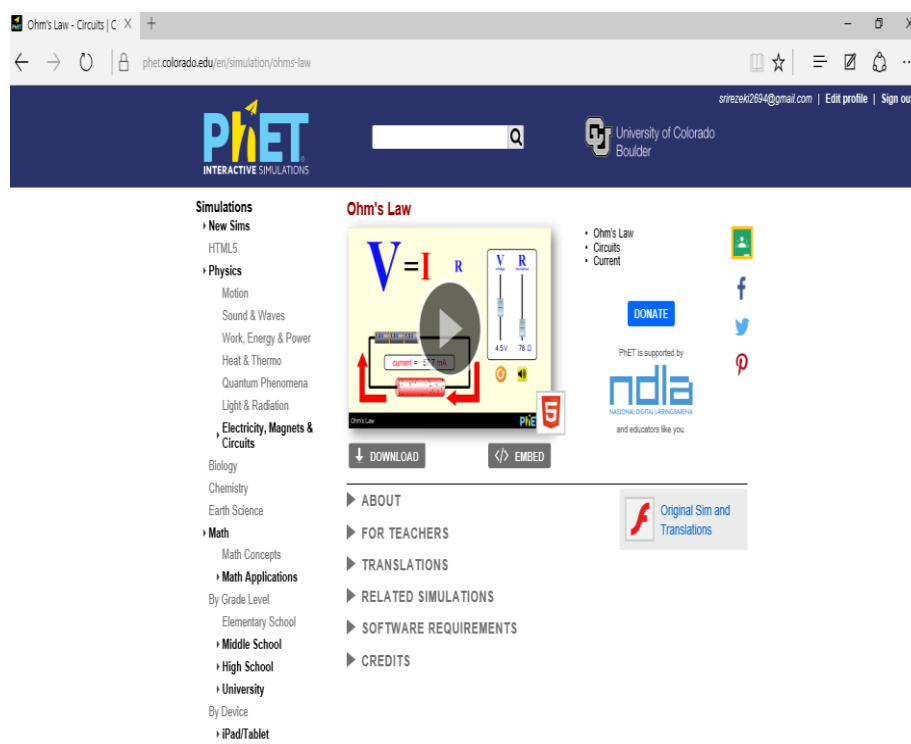
- Menjelaskan hubungan arus dan tegangan
- Membuat grafik hubungan arus dan tegangan
- Siswa mampu merumuskan arus, tegangan, dan resistansi
- Siswa mampu menjelaskan hukum ohm

1. Bahan/Alat

- Satu unit perangkat komputer
- Software* simulasi PhET
- Perangkat lunak *spreadsheet*

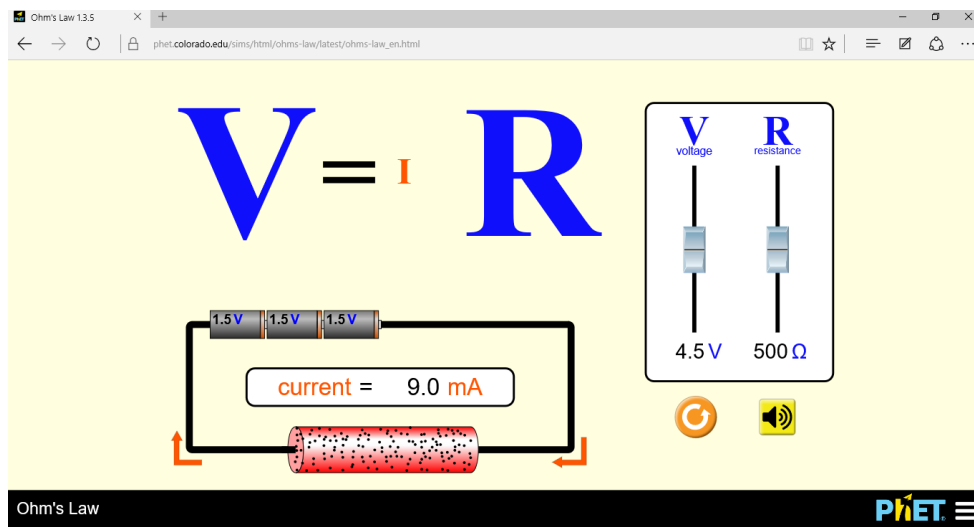
2. Prosedur Eksperimen

- Aktifkan perangkat lunak PhET
- Pilihlah simulasi Ohm's Law (Hukum Ohm)



The screenshot shows the PhET website interface for the Ohm's Law simulation. The browser address bar displays "phet.colorado.edu/en/simulation/ohms-law". The page header includes the PhET logo, a search bar, and the University of Colorado Boulder logo. The main content area features the simulation title "Ohm's Law" and a central image of the simulation interface. The simulation interface shows a circuit diagram with a battery, a resistor, and a voltmeter. The equation $V = IR$ is displayed prominently. Below the simulation image are buttons for "DOWNLOAD" and "EMBED". To the right of the simulation image, there are social media icons for Facebook, Twitter, and Pinterest, along with a "DONATE" button and a "PHET is supported by" logo for ndia. A sidebar on the left lists various simulation categories such as "New Sims", "Physics", "Math", and "University".

c. Bukalah simulasi Ohm's Law



- d. Atur nilai resistor pada 200 Ohm
- e. Dengan resistor 200 Ohm, ubah angka di tegangan, catat juga besar arusnya, lakukan lagi dengan mengganti tegangan sebanyak 5 kali
- f. Masukkan hasilnya dalam tabel
- g. Lakukan langkah 1 s.d 2 untuk tegangan 5 V

Resistor=200 Ohm

No	Tegangan (V)	Arus (A)
1		
2		
3		
4		
5		

Tegangan= 4 V

No	Resistor (Ohm)	Arus (A)
1		
2		
3		
4		
5		

3. Diskusi

1. Pada tegangan 200 V buatlah grafik hubungan arus dan resistor
2. Pada hambatan 4 Ohm buatlah grafik hubungan antara tegangan dan arus
3. Jelaskan grafik anda menggunakan kata-kata anda sendiri
4. Tentukan nilai hambatan berdasarkan hukum Ohm