**IB Physics**

Currents and Circuits - Chapter 18&19 Syllabus

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| **Block** | In class : | Due on this class: |
| **1**  **Dec**  **5** | **GW**-Current, Voltage, Power  **IW**-Circuit PHET Part 1 | **VF 18A, 18B, 18D, 18E**  Turn in Electric Field Mapping (1), Millikan Oil Drop (4), and RC Circuits Labs (2) |
| **2**  **Dec**  **9** | **GW**-Solving Series and Parallel circuits  **IW**-Circuit PHET Part 2 | **VF 18F, 18G, 18H** |
| **3**  **Dec**  **11** | **SA18.1 Currents (First 30 minutes)**  **VF**-18I Reducing Resistances  **GW**-Single Popper Networks (18J1) | Turn in FA18.1 |
| **4**  **Dec**  **13** | **GW**-Solving Double Popping Networks  **GW**-FA19.1 Series and Parallel | **VF 18I?**  **VF 18J1?**  **VF 18J2** |
| **5** Dec17 | **SA19.1 Parallel and Series (First 30 minutes)**  **VF**-18L Kirchhoff's Laws  **DI**-Kirchhoff's Laws | Turn in FA19.1 |
| **6** Dec19 | **GW**-Kirchhoff's Laws  **GW**-FA19.2 Network Reductions | **VF 18L** |
| 7Jan6 | **SA19.2 Networks (First 30 minutes)**  **IW**-FA19.3 Kirchhoff's  **GW**-Labs | Turn in FA19.2  **VF Labs - R wire, LB+D, IRB, OSC** |
| **8** Jan8 | **SA19.3 Kirchhoff's Laws (First 30 minutes)**  **IW**-VF 18C1, 18C2  **GW**-Labs | Turn in FA19.3 |
| 9Jan10 | **GW**-Labs | **VF 18C1 and 18C2**  Turn in FA18.2 (Resistivity and drift) |
| **10** Jan14 | **GW**-Labs | **VF 18N**  Turn in FA19.4 (Adding Capacitors) |
| **Jan 14**  **Jan 15** | IB Research Symposia |  |
| **11**  **Jan**  **16** | IB Test on Circuits | Turn in IB Questions |
| **12**  **Jan**  **21** | **MAGNETS!!!!!!!!!**  **DI**-Demos and the three right hand rules  **GW**-20.1, 20.2a-d | **VF 20A, 20B, 20C** |
| **Finals** | Group IB Question Final |  |
| **1**  **Feb**  **6** | **DI**-Hysteresis Demo  **GW**-20.2e  **GW**-FA20.1, 20.2 | **VF 20D, 20E, 20F**  **Turn In:** Resistance of a Light bulb and Diode  **Turn In:** Resistance of a Wire  **Turn In:** Internal Resistance of a Battery/Circuit building  **Turn In:** Oscilloscope Lab |

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| Assignments   * 5 Labs/Pre Lab   + Resistance of wire – You design the DCP (30 pts)   + Resistance of light bulb and diode (30 pts)   + Internal resistance of a battery (20 pts)   + Oscilloscope Lab – Quick thing with the oscilloscope (20 pts) * 4 summative/6 Formative Assessments   + 18.1 - Ohm’s law, current, power   + 18.2 - Resistivity and electron drift speed (No summative)   + 19.1 - Simple series and parallel circuits   + 19.2 - Networks of circuits   + 19.3 - Kirchhoff's Laws   + 19.4 - Capacitors in parallel and series (No Summative) | **Handouts** |