

### AP Physics 30 Reading List

Here are the various topics we will cover this year in order. If you are away from class for an extended period of time or require more review, here is what you need to do. **(P)** Pearson Text; **(CJ)** Cutnell & Johnson text for AP level material.

| Unit                         | Topic                            | Reading<br>(P) Pearson<br>(CJ) Cutnell & Johnson    | Questions There are many Practice Problems and questions at the end of each chapter and unit that have not been listed below, but make good review. |
|------------------------------|----------------------------------|---|---|
| <b>Momentum</b>              | Momentum                         | (P) 448-453<br>(CJ) 189 - 193                       | (P) P 453: 7, 8, 9, 13, 15  |
|                              | Impulse                          | (P) 454-466<br>(CJ)                                 | (P) P 467: 7, 8, 9, 10, 11<br>(CJ)  |
|                              | 1-D Collisions                   | (P) 468-485<br>(CJ) 193-202                         | (P) P 477: 1, 2; P 486: 2, 6, 7, 8, 9, 10, 11   |
|                              | 2-D Collisions                   | (P) 487-498<br>(CJ) 203-209                         | (P) P 492: 1, 2; P 494: 1, 2; P499: 5, 6, 7, 8, 9, 10   |
|                              | Unit Review                      |   | (P) P 503: 18, 24, 32, 40, 43, 44, 45, 48, 50, 53, 59, 61, 64, 69<br>(CJ) P 211: 13, 15, 39   |
| <b>Angular Momentum</b>      |                                  | (CJ) 263 - 267                                      | (CJ) P 273: 60, 63, 65,   |
| <b>Forces &amp; Fields</b>   | Static Electricity               | (P) 512-522<br>(CJ) 529-534                         | (P) P523: 5, 6, 7   |
|                              | Coulomb's Law                    | (P) 524-537<br>(CJ) 529-534                         | (P) P 533: 1, 2; P 538: 5, 6, 7, 8  |
|                              | Chapter Review                   |   | (P) P 540: 12, 13, 22, 23, 25   |
|                              | Electric Fields                  | (P) 542-553<br>(CJ) 534-538                         | (P) P 549: 1, 2; P 550: 1, 2; P 553: 6, 7, 8, 9, 10   |
|                              | Electric Field Lines & Energy    | (P) 554-568<br>(CJ) 539-559;<br>565-571;<br>576-579 | (P) P 561: 1, 2; P 569: 4, 5, 6, 7, 8, 9, 10, 12  |
|                              | Electrical Interactions          | (P) 570-575   | (P) P 573: 1, 2; P 574: 1, 2; P 575: 3, 4, 5, 6, 7, 8, 10, 11   |
|                              | Chapter Review                   |   | (P) P 578: 15, 17, 19, 20, 21, 23, 27<br>(CJ) P 559: 4, 8<br>(CJ) P 560: 3, 8, 12, 15, 21, 29, 33, 52   |
|                              | Magnetic Forces & Fields         | (P) 582-591   | (P) P 592: 9, 10, 11, 12,   |
|                              | Moving Charges & Magnetic Fields | (P) 593-601   | (P) P 600: 1, 2; P 601: 5, 6, 7, 8, 9   |
|                              | Conductors & Magnetic Fields     | (P) 602-612   | (P) P 605: 1, 2; P 613: 8, 9, 11  |
| Magnetic Fields & Technology | (P) 614-619                      |   |   |

| <b>Unit</b>                      | <b>Topic</b>               | <b>Reading</b><br>(P) Pearson<br>(CJ) Cutnell & Johnson | <b>Questions</b> There are many Practice Problems and questions at the end of each chapter and unit that have not been listed below, but make good review. |
|----------------------------------|----------------------------|---|--|
|                                  | Chapter Review             |   | (P) P 622: 15, 16, 20, 22, 24, 26,   |
|                                  | Unit Review                |   | (P) P 626: 16, 25, 29, 36, 39, 41, 42, 50, 55, 58, 59, 60, 61, 62  |
| <b>Electric Circuits</b>         | DC circuits & Ohm's Law    | (CJ) 595-603  |  |
|                                  | Series & Parallel Circuits | (CJ) 606-615  |  |
|                                  | Kirchhoff's Rules          | (CJ) 615-620  |  |
|                                  | Chapter Review             |   | (CJ) P 630: 12, 20, 25, 41, 50, 57, 62, 71, 75,  |
| <b>Electromagnetic Radiation</b> | EMR spectrum               | (P) 636-646   | (P) P 647: 8, 9, 10, 13  |
|                                  | Speed of EMR               | (P) 648-651   | (P) P 652: 3, 4, 5, 6,   |
|                                  | Reflection                 | (P) 653-665   | (P) P 664: 1, 2, 4; P 665: 8, 9,   |
|                                  | Refraction & lenses        | (P) 666-681   | (P) P 668: 1, 2, 3; P 673: 1; P 681: 1, 2; P 683: 9, 10, 12, 14, 16, 17  |
|                                  | Diffraction & Interference | (P) 684-696   | (P) P 689: 1, 2; P 691: 1, 2; P 697: 3, 4, 6, 7, 8, 10, 13   |
|                                  | Chapter Review             |   | (P) P 699: 12, 14, 19, 20, 22, 23, 26, 33, 35, 38, 40  |
|                                  | Particle-Wave Duality      | (P) 702-709   | (P) P 707: 1, 2; P 710: 2, 3, 5  |
|                                  | Photoelectric effect       | (P) 711-720   | (P) P 716: 1, 2; P 719: 1, 2; P 720: 2, 4, 6, 8, 9, 10   |
|                                  | Compton Effect             | (P) 721-725   | (P) P 725: 2, 3, 6, 7  |
|                                  | Matter Waves               | (P) 727-733 & 737 - 740                                 | (P) P 736: 5, 6  |
|                                  | Chapter Review             |   | (P) P 742: 6, 7, 8, 9, 11, 13, 15, 16, 18, 20  |
|                                  | Unit Review                |   | (P) P 746: 26, 30, 32, 37, 40, 43, 46, 48, 49, 50, 52, 55, 56, 57, 63, 74  |
|                                  | <b>Atomic Physics</b>      | Electron Discovery & Atomic Structure                   | (P) 754-759  |
| Quantization of Charge           |                            | (P) 761-764   | (P) P 764: 1, 2; P 765: 4, 5, 6, 7   |
| Discovery of Nucleus             |                            | (P) 766-769   | (P) P 770: 4, 5, 7   |
| Bohr Model                       |                            | (P) 771-779   | (P) P 780: 6, 8, 11  |
| Quantum Model of Atom            |                            | (P) 782-783   |  |

| <b>Unit</b>                              | <b>Topic</b>             | <b>Reading</b><br>(P) Pearson<br>(CJ) Cutnell & Johnson | <b>Questions</b> There are many Practice Problems and questions at the end of each chapter and unit that have not been listed below, but make good review. |
|--|--------------------------|---|--|
|  | Chapter Review           |   | (P) P 786: 3, 4, 15, 21, 24,   |
|  | Structure of Nucleus     | (P) 790-796   | (P) P 791: 1, 2; P 796: 1, 3, 4, 7, 10   |
|  | Radioactive Decay        | (P) 797-809   | (P) P 801: 1, 2, 3; P 803: 1 (top), 1 (mid); P 805: 1; P 810: 3, 5, 8, 12  |
|  | Radioactive Decay        | (P) 811-816   | (P) P 813: 1, 2; P 814: 1, 2; P 817: 4, 6, 7, 8  |
|  | Fission & Fusion         | (P) 818-823   | (P) P 819: 1, 2, 3; P 824: 1, 5, 6, 9  |
|  | Chapter Review           |   | (P) P 826: 14, 25, 26, 28  |
|  | Particle Detectors       | (P) 830-835   | (P) P 839: 6, 8  |
|  | Particles & Accelerators | (P) 840-844   |  |
|  | Standard Model           | (P) 845-849   |  |
|  | Chapter Review           |   | (P) P 851: 16, 17, 18  |
|  | Unit Review              |   | (P) P 856: 4, 10, 14, 16, 17, 18, 28, 29, 30, 34, 35, 39, 40, 56, 61   |
| <b>Vector Addition &amp; Subtraction</b> | Review at AP Level       | (CJ) 10 - 19  |  |
| <b>1 Dimensional Kinematics</b>          | Review at AP Level       | (CJ) 34 - 50  | (CJ) P 53: 18, 31, 33, 58, 61, 65,   |
| <b>2 Dimensional Kinematics</b>          | Review at AP Level       | (CJ) 57- 60; 62 - 78                                    | (CJ) P 80: 10, 20, 24, 25, 36, 29, 37, 45  |
| <b>Dynamics, Gravity</b>                 | Review at AP Level       | (CJ) 86 - 121   | (CJ) P 123: 7, 9, 17, 15, 39, 41, 49, 51, 57, 83, 89   |
| <b>Uniform Circular Motion</b>           | Review at AP Level       | (CJ) 131 - 149  | (CJ) P 151: 11, 19, 21, 24, 59   |
| <b>Work and Energy</b>                   | Review at AP Level       | (CJ) 155 - 181  | (CJ) P 183: 11, 15, 33, 43, 44, 51, 71, 79, 85   |
| <b>Rotational Kinematics</b>             | Review at AP Level       | (CJ) 216 - 233  | (CJ) P 235: 13, 15, 35, 61,  |
| <b>Rotational Kinematics</b>             | Review at AP Level       | (CJ) 241 - 262  | (CJ) P 270: 11, 13, 21, 23, 39, 51, 53   |
| <b>Simple Harmonic Motion</b>            | Review at AP Level       | (CJ) 276 - 293  | (CJ) P 304: 8, 9, 12, 31, 45   |
| <b>Waves and Sound</b>                   | Review at AP Level       | (CJ) 467 - 495  | (CJ) P 496: 8, 9, 29, 41, 52, 57, 77,  |
| <b>Superposition and Interference</b>    | Review at AP Level       | (CJ) 503 - 522  | (CJ)P 525: 10, 27, 31, 41, 49,   |