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| **Fall 2024** SRCS ~ Science Department **Physical Science College Prep** (2A) Grade 10 c. eckart | | |
| **Date/Day** | **chapter** | **Topics** |
| Q1: 1 | intro | Proc. checklist/class expect; syllabus & text; Hw proc.; the History of Science ch 1 slides 1,2 |
| 2 | 1 | the History of Science ch 1 slides 2-12 (Worldviews matter; the Structure of Scientific Revolutions; History of Science) |
| 3 |  | 12-end; (Scientific method & its limits; Newton’s 1st law); Ch 1 Q&A |
| 4 |  | \*ch 1 hw due; GRADE; (**Newton’s 1st Law**) slides pp. 1-12 (Speed; velocity; constant v) |
| 5 |  | Ch 1 QUIZ; **ch 1 TEST**; ch 2 intro |
| 6 | 2 | Ch 2 slides 12-35 (applications of the law; Net F) |
| 7 |  | Ch 2 slides 45-end (Equilibrium; Support F; Normal F; relativity) |
| 8 |  | Activity worksheet; Ch 2 Q&A |
| 9 |  | \*ch 2 hw due; |
| 10 |  | ch2 QUIZ; **ch 2 TEST**; |
| 11 | 3 | ch 3 (**Newton’s 2nd Law**) slides 1-14 (Aristotelian & Galilean motion) |
| 12 |  | Go over ch 2 test; Ch 3 slides 14-34 (a; scalar vs. vector quant.; + & - a; F/mass/a [2nd Law]; Ffriction) |
| 13 |  | Ch 3 notes slides 34-end (a in free fall; effects of Rair on a; v & d in free fall)Ch 3 Q&A; pretest |
| 14 |  | \* ch 3 hw due; grade |
| 15 |  | ch 3 QUIZ; **ch 3 TEST** |
| 16 |  | Go over ch 3 test; ch 4 (**Newton’s 3rd Law**) slides 1-6 (interactions; drawing F vectors; 3rd Law) |
| 17 | 4 | Ch 4 slides 6-33 (Action-Reaction pairs; falling objects revisited; applications; horse-cart dilemma; review) |
| 18 |  | Ch 4 slides 33-end; ch 4 Q&A; |
| 19 |  | \*ch 4 hw due (GRADE IN-CLASS) |
| Q1 end: 20 |  | ch 4 QUIZ; **ch 4 TEST**; |
| 21 | 5 | Go over ch 4 test; ch 5 (**Momentum**) slides 1-12 (Applications of momentum) |
| 22 |  | Ch 5 slides 12-22 (formula/units; equality of diff. masses; impulse; 3 cases of changing *p*) |
| 23 |  | Ch 5 slides 23-59 end (bouncing; conservation of momentum; collisions) |
| 24 | PSAT's | Ch 5 Momentum lab (baseball) |
| 25 |  | Momentum lab due; Ch 5 hw Q&A; |
| 26 |  | (school trip 10.22-25); |
| 27 |  | \*ch 5 hw due; grade |
| 28 |  | ch 5 QUIZ; **ch 5 TEST;** intro ch 6 |
| 29 | 6 | Go over ch 5 test; Ch 6 (**Energy & Work**) slides 1-16 (formula/units; getting joules) |
| 30 |  | Ch 6 slides 17-30 (joules wrap up; W applications; power (formula/units)) |
| 31 |  | work on ch 6 hw |
| 32 |  | Ch 6 slides 31-49 (power con’t; E(potential & kinetic); Grav. Epotential; work E theorem) Veteran's Day (NO SCHOOL 11.10) |
| 33 |  | Ch 6 slides 50-end (conservation of E; machines & efficiency); |
| 34 |  | Ch 6 hw Q&A |
| (11.20-24) |  | **THANKSGIVING BREAK** |
| 35 |  | \*ch 6 hw due (GRADE IN CLASS) |
| 36 |  | **Ch 6 quiz; ch 6 TEST** |
| 37 |  | Go over ch 6 test; intro eggdrop project |
| 38 |  | Eggdrop project workday |
| 39 |  | Eggdrop project workday |
| 40 |  | Eggdrop day (project due with weigh-in 15 minutes after class starts); discuss results |
| 41 |  | Review: make study guide off study guide |
| (F,12.16) |  | REVIEW; Chapters 1-6 midterm |
| T (12.20) |  | Chapters 1-6 midterm |
|  |  | intro g lab; g lab Q&A; G lab due |

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| **Spring 2025** SRCS ~ Science Department **Physical Science College Prep** (2A) Grade 10 c. eckart | | |
| **Date/Day** | **chapter** | **Topics** |
| Q3: 1 | 7 | Ch 7 notes pp. 1-23 (g sneak peek; gravity’s greats; falling moon; Universal Law of g; g & d) |
| 2 |  | Ch 7 notes pp. 24-37 (applying the Universal law of g; consequences of inverse squaring; effects of m & d on g; tides) (NO SCHOOL 1.16) |
| 3 |  | Ch 7 notes wrap up 37-66 |
| 4 |  | Ch 7 hw Q&A |
| 5 |  | \*ch 7 hw due (GRADE IN CLASS); |
| 6 |  | ch 7 QUIZ; **ch 7 TEST;** |
| 7 | 8 | Ch 8 projectiles slides 1-16 |
| 8 |  | Ch 8 projectiles slides 17-34 |
| 9 |  | Ch 8 projectiles slides 34-42 |
| 10 |  | Ch 8 hw Q&A; |
| 11 |  | \*ch 8 hw due |
| 12 |  | ch 8 QUIZ; **Ch 8 test;** Paper Airplane project expl |
| 13 |  | Paper Airplane workday |
| 14 |  | Paper Airplane workday |
| 15 |  | Paper Airplane Competition NO SCHOOL 2.19 |
| 16 | 9 | Ch 9 heat slides 1-21; NOVA (Absolute Zero) |
| 17 |  | NOVA (Absolute Zero finish & discuss) |
| 18 |  | Ch 9 heat slides 22-39 |
| 19 |  | Ch 9 heat slides 40-end |
| 20 |  | Ch 9 heat Q&A; |
| 21 |  | \*Ch 9 hw due**;** grade |
| 22 |  | ch 9 QUIZ;  **Ch 9 heat test** |
| 23 | 10 | Ch 10 thermal E & transfer slides 1-13 |
| 24 | Q3 end: (3.16) | Ch 10 thermal E & transfer slides 14-24 |
| Q4: 25( |  | Ch 10 thermal E & transfer slides 25-38; explain Thermal March Madness |
| 26 |  | Ch 10 thermal E & transfer slides 39-71 |
| 3.26-4.2 |  | **SPRING BREAK** |
| 27 |  | Ch 10 thermal E & transfer slides 72-105 |
| 28 |  | \* Thermal March Madness Competition (hw workday for those eliminated as period wears on) |
| 29 |  | Ch 10 math practice/review |
| 30 |  | Ch 10 Q&A; Physics of STAR WARS: The LAST JEDI overview; start film |
| 31 |  | \*ch 10 hw due; **grade; watch** The LAST JEDI overview |
| 32 |  | ch 10 QUIZ; **Ch 10 test**; Watch The LAST JEDI |
| 33 |  | Finish film; Discuss review concepts |
| 34 | Chemistry | Finish Physics of STAR WARS: The LAST JEDI overview; |
| 35 |  | History of the Atom/ Periodic table basics |
| 36 |  | Atomic inventories & valences; e- dot notation |
| 37 |  | Bonds Types & valences |
| 38 |  | Chemical Formulas & Balancing (intro) |
| 39 |  | Balancing Practice |
| 40 |  | Ch "21" QUIZ; **chem test** |
| 41 |  | Molar Things: intro to Stoichiometry Mass to MOLE; mole to mass Mass to particles Volume to particles |
| 42 |  | Slosh day--there's always a field trip or 2 in SEM 2 |
| 43 |  | Review: make study guide from study guide |
| (M-W ,5.21-5.23) |  | Review for Final; Final Exams |
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