**Data Booklet Scavenger Hunt**

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| 1. What does the last equation in sub-topic

5.2 describe? |
| 1. What is the permittivity of free space?
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| 1. Write two equations that describe some

sort of exponential growth or decay. |
| 1. In what subtopic is the average kinetic

energy of a molecule listed? |
| 1. What function describes the velocity of a

simple harmonic oscillator? |
| 1. In which sub-topic can you find the

Heisenberg uncertainty principle? How many are there? |
| 1. In which sub-topic is the propagation of

uncertainty found? |
| 1. What is the definition of the Coulomb

constant? (not the value) |
| 1. In sub-topic 9.2, what does b stand for?
 |
| 1. In which sub-topic can you find the

equation for magnetic flux? What variable is used for flux? |
| 1. What particles experience the weak force?
 |
| 1. How many meters are in a femtometer?
 |
| 1. What is the formula for angular

magnification? |
| 1. Define root mean square voltage.
 |
| 1. How many joules are in one kilowatt-hour?
 |
| 1. Write the equation for the average power

produced by an AC generator. |
| 1. Write the Rayleigh Criterion.
 |
| 1. What is the gas constant (R)?
 |
| 1. Define Kirchoff's Laws.
 |
| 1. In sub-topic C.1, what do the letters v and

u stand for? |
| 1. In which sub-topic can you find the

relationship between kinetic energy and momentum? |
| 1. In what sub-topic can I find the definition

of doppler shift? What is f'? |
| 1. What is the double slit equation?
 |
| 1. What formula describes the kinetic energy of

an oscillating mass on a spring? |
| 1. In the definition for capacitance, what does

the Ɛ stand for? |
| 1. Write Coulomb's Law.
 |
| 1. In the nuclear decay equations, what does ʎ

stand for? |
| 1. In which subtopic might I find the equation

that won Einstein a Nobel prize? |
| 1. How many formulas for friction are given in

 sub-topic 2.2? What do *s* and *d* stand for? |
| 1. What is the definition of the time constant

for a capacitor? |
| 1. What is the definition of the energy found

in a photon? |
| 1. In which sub-topic can you find the

definition of centripetal acceleration? Write both. |
| 1. In which sub-topic will you find the

definition of internal resistance? |
| 1. What is the formula dealing with the

Space-time interval? |
| 1. List three definitions of power that **don't**

include area. |
| 1. Write the equation for energy stored in a

capacitor. |
| 1. In section 10.1 there is a formula for the

work done by an electric field. In what other section can this formula be found? |
| 1. In sub-topic 3.2, what is n=N/NA defining?
 |
| 1. In which sub-topic can you find a definition of

Faraday's Law? What is it? |
| 1. What is the mediating particle in the strong

interaction? |
| 1. In which section can I find an equation for the

schwarzschild radius? |
| 1. What is the symbol for a variable resistor?
 |
| 1. What is the equation for escape velocity?
 |
| 1. What is the equation for the Lorentz factor?
 |
| 1. In sub-topic 2.1, what quantities do the letters

u and s represent? |
| 1. Write Malus' Law for polarizing filters.
 |
| 1. Write the formula for an object in circular orbit.
 |
| 1. Write the Stefan-Boltzmann Law.
 |
| 1. Write Wien's Law.
 |
| 1. In sub-topic 6.2, what are two things to call the

value "g"? |
| 1. What is the charge and baryon number of a

strange quark? |
| 1. In which sub-topic is the Ideal Gas Law found?
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| 1. In sub-topic 10.2, what is the equation to the left

of Coulomb's Law called? |
| 1. Define albedo.
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