

PHYSICAL SCIENCE FLIPCARDS™

A+ Science - Grades 7 & 8



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Science Flip Cards

The *Science Flip Cards* provide a method to organize the vast amount of information the UIL science competitor must master in a concise, compact format. The *Flip Cards* are not a replacement for studying scientific concepts, but rather a method of reinforcing basic concepts that appear on UIL Science Invitational tests. We believe you will find the *Flip Cards* to be an integral part of not only your UIL Science Contest preparation, but also a great review aid science class.

Good luck in your science endeavors!

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UIL Middle School Science Tests

The UIL Middle School Science Test is divided into two divisions: Science I (Grade 7) and Science II (Grade 8). The test consists of 35 multiple choice questions which you will have 45 minutes to complete. The scoring of the test is as follows: five (5) points for each correct answer, zero (0) points for each unanswered question, and minus two (-2) points for each incorrect answer.

Test Composition

From the UIL Academic website we read: “Emphasis for the science contest will be placed on knowledge of scientific fact, understanding of scientific principles, and the ability to think through scientific problems....Such concepts include, but are not limited to: matter and energy, equilibrium, force and motion, physical and chemical properties, the relationship between organisms and the environment, the components of our solar system, the composition of matter and genetics.”

The test is composed from material in current state-adopted textbooks, *Science World*, and *National Geographic World*.

Hexco Testing Material

These review materials are not a replacement for a dedicated instructor/coach. They will, however, help organize, guide, and direct your study time and help you to brush up on material that you might have covered in previous years. This review material, combined with your ongoing science instruction, will not only help to improve your Science I and II test scores, but will also will improve your knowledge of general science information and prepare you for our Texas state standardized tests.

Suggestion: To make this product more user-friendly, we have found that using index tabs to mark the individual categories makes the topics easier to access and locate. We also suggest you personalize your flip cards by adding cards and making notes and adding cards as needed.

Metric System

System of measurement based on units of 10

Base units: meter- length; liter- measure of volume; gram- measure of mass; Newton- measure of force; temperature- measure of Celsius or Kelvin degrees; second- measure of time

Prefixes:

My Crazy Dog Bingo Drinks Hot Koolaid:
milli, centi, deci, base unit, deka, hecto, kilo
kilo, hecto, deka, base, deci, centi, milli

move decimal one place → for each step right

move decimal one place ← for each step left

Phase Change

Requires energy transfer; temperature increase, kinetic energy increases

Melting: solid \rightarrow liquid

Freezing/solidification: liquid \rightarrow solid

Deposition: gas directly to a solid

Sublimation: solid directly to a gas

Evaporation/Vaporization: liquid \rightarrow gas

Condensation: gas \rightarrow liquid

Solar System - continued

Outer Planets - all much larger than inner planets, no solid surface, have rings and/or moons

Jupiter: largest in solar system; Great Red Spot-2X diameter of Earth; has huge weather systems like a hurricane

Saturn: has both moons and rings- many just discovered

Uranus: methane rich atmosphere; very cold (-200 C); many moons

Neptune: methane rich atmosphere, blue tint; Great Dark Spot- is actually a huge storm

Pluto: oddball; considered dwarf planet; orbit is long ellipse and at an angle different than all the other planets



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