

Activity "Administrivia":

Intended Grade Level:

6th, 7th, and 8th

Key Concepts:

Total lung capacity,
lung volumes,
exhaled air,
lung volume
measurements

Process Skills utilized in lesson:

Analyzing data –
observing trends and
variation, making accurate
and precise measurements
involving the volume
of a gas, applying
mathematical calculations

Previous learning assumed:

Knowledge of lung
mechanics helpful, a
concept of volume as a
measurement expressed in
mL and L, familiar with
the mathematical
calculations for mean,
median, mode and range

Relevant TEKS

Language Arts (many of these correlate with 7 and 8 grade): 6.1) Listening/speaking/purposes. The student listens actively and purposefully in a variety of settings. The student is expected to: (A) determine the purposes for listening such as to gain information, to solve problems, or to enjoy and appreciate (4-8)
6.4) Listening/speaking/culture. The student listens and speaks to gain and share knowledge of his/her own culture, the culture of others, and the common elements of cultures. The student is expected to: (A) connect his/her own experiences, information, insights, and ideas with experiences of others through speaking and listening.
6.6) Reading/word identification.

The student uses a variety of word recognition strategies. The student is expected to: (A) apply knowledge of letter-sound correspondences, language structure, and context to recognize words (4-8); (B) use structural analysis to identify root words with prefixes such as dis-, non-, in-, and suffixes such as -ness, -tion, and -able (4-6); and (C) locate the meanings, pronunciations, and derivations of unfamiliar words using dictionaries, glossaries, and other sources.

6.9) Reading/vocabulary development. The student acquires an extensive vocabulary through reading and systematic word study. The student is expected to: (A) develop vocabulary by listening to selections read aloud (4-8); (C) use multiple reference aids, including a thesaurus, a synonym finder, a dictionary, and software, to clarify meanings and usage (4-8); (E) study word meanings systematically such as across curricular content areas and through current events (4-8)

6.15) Writing/purposes. The student writes for a variety of audiences and purposes and in a variety of forms. The student is expected to: (A) write to express, discover, record, develop, reflect on ideas, and to problem solve (4-8); (C) write to inform such as to explain, describe, report, and narrate (4-8);

6.16) Writing/penmanship/capitalization/punctuation/spelling. The student composes original texts, applying the conventions of written language such as capitalization, punctuation, penmanship, and spelling to communicate clearly. The student is expected to: (A) write legibly by selecting cursive or manuscript as appropriate (4-8); (B) capitalize and punctuate correctly to clarify and enhance meaning such as capitalizing titles, using hyphens, semicolons, colons, possessives, and sentence punctuation (6-8); (C) write with accurate spelling of syllable constructions, including closed, open, consonant before -le, and syllable boundary patterns (3-6); (E) use resources to find correct spellings (4-8);

6.17) Writing/grammar/usage. The student applies standard grammar and usage to communicate clearly and effectively in writing. The student is expected to: (A) use regular and irregular plurals correctly (4-6); (B) write in complete sentences, varying the types such as compound and complex, and use of appropriately punctuated dependent clauses (6); (C) use conjunctions to connect ideas meaningfully (4-8); (D) use adjectives (comparative and superlative forms) and adverbs appropriately to make writing vivid or precise (4-8); (E) use prepositional phrases to elaborate written ideas (4-8);

Science.

6.10) Science concepts. The student knows the relationship between structure and function in living systems. The student is expected to: (A) differentiate between structure and function; (B) determine that all organisms are composed of cells that carry on functions to sustain life; and (C) identify how structure complements function at different levels of organization including organs, organ systems, organisms, and populations.

7.3) Scientific processes. The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to: (B) draw inferences based on data related to promotional materials for products and services; (D) evaluate the impact of research on scientific thought, society, and the environment; and

7.9) Science concepts. The student knows the relationship between structure and function in living systems. The student is expected to: (A) identify the systems of the human organism and describe their functions; and (B) describe how organisms maintain stable internal conditions while living in changing external environments.

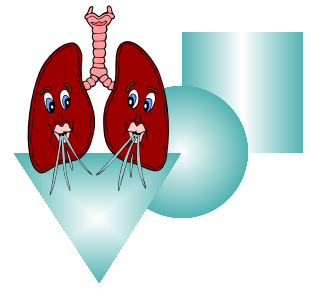
7.11) Science concepts. The student knows that the responses of organisms are caused by internal or external stimuli. The student is expected to: (A) analyze changes in organisms such as a fever or vomiting that may result from internal stimuli;

8.6) Science concepts. The student knows that interdependence occurs among living systems. The student is expected to: (A) describe interactions among systems in the human organism; (B) identify feedback mechanisms that maintain equilibrium of systems such as body temperature, turgor pressure, and chemical reactions; and (C) describe interactions within ecosystems.

8.14) Science concepts. The student knows that natural events and human activities can alter Earth systems. The student is expected to: (B) analyze how natural or human events may have contributed to the extinction of some species; and (C) describe how human activities have modified soil, water, and air quality.

Technology.

(8.10) Communication. The student formats digital information for appropriate and effective communication. The student is expected to: use productivity tools to create effective document files for defined audiences such as slide shows, posters, multimedia presentations, newsletters, brochures, or reports.



Activity Overview Continued



LESSON 1
ACTIVITY 1A

Pulmo-Park