



Grade 6-8 Content Standards and
Common Core Standards: English
Language Arts Standards »
Science & Technical Subjects



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WHAT'S IN THE PROGRAM:

- 47 different *Science DVTs*, each in the form of both a Power Point slide (.pptx) and Interactive Adobe PDF document with embedded textboxes.
- Samples of how K-12 teachers have used each of the DVTs
- Step-by-Step guidelines for implementing an array of specific teacher-assisted and peer-assisted routines designed for use *Before / During / After* a lesson.

\$39

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A free demonstration version of this program may be downloaded from
www.MakesSenseStrategies.com.

The fully-functional version of the program is available for purchase and immediate download at www.MakesSenseStrategies.com. (single-user license). Purchase orders accepted.

For information about multi-user licenses or bulk purchases of the program, please contact us at VisualTools@MakesSenseStrategies.com

DESCRIPTION

The *6-8 Differentiated Visual Tools for SCIENCE Reading and Writing Core Standards* consists of a collection of interactive **discipline-specific** visual tools designed to address science content standards associated with learning essential understandings of generative ideas in science. Thus, the program includes DVTs designed to address key essential understandings associated with the following topics:

Phenomena	Procedure / Process	Discoveries	Life Forms
Theories	Structures & Systems	Experiments	Research

In addition, each DVT is designed to address a specific *Common Core Language Arts Standard* and *Career and College Readiness Standards* for reading and writing about science as well as evaluating information in grades 6-8. This software toolkit is also appropriate for use with struggling

learners placed in higher grades but whose developmental functioning is more equivalent to 6-8 grade levels, thus they are ideal for differentiating instruction based on the developmental needs of high and typical achieving students as well as those who are struggling learners.

These visual tools are particularly useful when addressing literacy standards that are especially challenging to teach because the DVTs enable teachers to SEE how the complex standards can be addressed in relatively simple ways. The embedded prompts on the DVTs cue students to engage in specific thinking processes designed to facilitate their performance.

The program includes ready-to-use Power Point slides with built-in animation features as well as interactive PDF files for each of the visual tools, plus samples of how teachers have used them. The program also includes mini-Power Point professional development presentations designed to explain the purpose and features of each visual tool.

The Interactive Science DVTs are designed for use with Macs or PCs and also work well with mobile devices, such as tablets, iPads, or smart phones. The digital DVTs may be emailed to students or parents and/or saved to students' electronic portfolios. They are also ideal for Smart Boards, Promethium Boards, or LCD projectors. The interactive blackline masters are designed for printing hardcopies.

The licensed user (teacher) may make and distribute copies of the Science DVTs to students for whom s/he is responsible for teaching, but the DVTs may not be shared with non-licensed teachers or students not on the licensed teacher's role. The software may be loaded on the licensed-teacher's classroom computers (with the exception of computer labs) and on the teacher's personal computer.

Sample menu page (each topic has its own menu page)

science differentiated visual toolsTM

Phenomenon | Procedures | Discovery | Life Forms | Structures & Systems | Theory | Experiments | Research | Evaluating Information | Writing

Key Ideas

- Phenomenon Essentials**
 - PPt Interactive PDF Laws of Thermodynamics DVT explanation
- Phenomenon Relationships Web**
 - PPt Interactive PDF Diffusion DVT explanation

Phenomenon Sequences & Cycles

- 4-Step Sequence (simple)**
 - PPt Interactive PDF DNA Replication DVT explanation
- 4 Phases + Details**
 - PPt Interactive PDF Mitosis DVT explanation
- 7 Step Process**
 - PPt Interactive PDF Scientific Method DVT explanation
- Steps Analysis**
 - PPt Interactive PDF Mitosis cell division DVT explanation
- 2-Step Cycle**
 - PPt Interactive PDF Energy Cycle in Natural World DVT explanation
- 3-Step Cycle**
 - PPt Interactive PDF Cell Division DVT explanation
- 4-Step Cycle**
 - PPt Interactive PDF DNA Replication DVT explanation

Phenomena Comparisons

- Phenomenon Comparisons X 2**
 - PPt Interactive PDF Mitosis vs. Meiosis DVT explanation
- Phenomenon Comparisons X 3**
 - PPt Interactive PDF DNA Replication vs. Transcription vs. Translation DVT explanation

Phenomenon Cause/Effect Relationships

- Chain Reaction**
 - PPt Interactive PDF Energy Capture & Transfer DVT explanation
- Phenomenon Affects**
 - PPt Interactive PDF Ecosystem Climate DVT explanation
- Cause/Effect Sequence**
 - PPt Interactive PDF Electromagnetic Waves DVT explanation

Scroll down to view more

Illustrations of how DVTs are designed to address specific Core Standards

CCSS.ELA-LITERACY.RST.6-8.2 Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions.

Phenomenon Essentials Interactive PDF

This file includes fillable form fields. You can print the completed form and save it to your device or Acrobat.com. Highlight Existing Fields

Phenomenon Essentials menu science differentiated visual tools™
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PHENOMENON		
ALWAYS	DISTINCTIVE FEATURES SOMETIMES	NEVER
Factors that AFFECT (influence) the phenomenon		Phenomenon EFFECTS (results in...)
The phenomenon is connected to this idea... Because ...		The phenomenon is connected to this idea... Because ...

RELATIONSHIPS

Sample of how the DVT was used

Phenomenon Essentials science differentiated visual tools™
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Laws of Thermodynamics		
ALWAYS	DISTINCTIVE FEATURES SOMETIMES	NEVER
Energy and matter are always entering and leaving organism systems and chemical reactions. Heat energy is lost in every reaction	Molecules and compounds are rearranged to drive reactions. Energy is either stored or released in most reactions	Energy and matter are never created or destroyed in any reaction.
Factors that AFFECT (influence) the phenomenon The level of organization in an organism or system drives energy or heat transfer. Highly organized systems will spontaneously fall apart without the constant input of more energy.		Phenomenon EFFECTS (results in...) The Laws of Thermodynamics result in the gradual but consistent breakdown of matter into its simplest form. Without these laws, organisms would have no need to create or consume energy compounds.
The phenomenon is connected to this idea... Photosynthesis Because ... Sunlight is captured and converted into chemical compounds. Energy is stored at each step of Photosynthesis to BUILD organic compounds.		The phenomenon is connected to this idea... Cell Respiration Because ... Organic compounds are BROKEN down, releasing energy at every step. This process eventually recycles the components assembled in photosynthesis.

RELATIONSHIPS

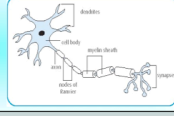
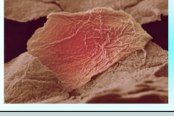
CCSS.ELA-LITERACY.RST.6-8.9 Compare and contrast the information gained from experiments, simulations, video, or multimedia sources.

Structures & Systems Comparison DVT PPT slide

STRUCTURE	STRUCTURE
PICTURE or DESCRIPTION	PICTURE or DESCRIPTION
BIGGER PICTURE: This structure is... part of a SYSTEM that... and/or member of a CLASS of things that...	BIGGER PICTURE: This structure is... part of a SYSTEM that... and/or member of a CLASS of things that...
WHERE this structure is usually found and/or HOW structure is formed	WHERE this structure is usually found and/or HOW structure is formed
KEY PARTS of structure & FUNCTION	KEY PARTS of structure & FUNCTION

Sample of how the DVT was used

Structure X 2 Comparisons science differentiated visual tools™
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STRUCTURE	STRUCTURE
Nerve Cell	Skin Cell
PICTURE or DESCRIPTION	PICTURE or DESCRIPTION
Nerve cells are designed to extend an electrical signal over long distances. 	Skin cells exist as flat plates of armor that shield our inner areas from the harsh environment. 
BIGGER PICTURE: This structure is... <input checked="" type="checkbox"/> part of a SYSTEM that... and/or <input type="checkbox"/> member of a CLASS of things that... ...sends messages from a stimulated region of the body to the brain & vice versa	BIGGER PICTURE: This structure is... <input checked="" type="checkbox"/> part of a SYSTEM that... and/or <input checked="" type="checkbox"/> member of a CLASS of things that... ...protects other body tissues from environment. Skin cells are layered for maximum protection into skin tissue; bottom layers are cubed; top layers flat like plates
WHERE this structure is usually found and/or HOW structure is formed Nerve cells are found in a network that spans across the entire organism. Structure develops from mesoderm cells in a developing organism	WHERE this structure is usually found and/or HOW structure is formed Skin cells and tissue are found on the outside of most organisms. Both structure and system develop from the ectoderm of an embryo.
KEY PARTS of structure & FUNCTION Body of nerve cell holds major organelles Dendrites are long fingers of tissue that receive signals. Axons are thin tissue which sends signals.	KEY PARTS of structure & FUNCTION All skin cells contain nuclei, mitochondria, etc. Plasma membrane surrounds cytoplasm DNA located inside the nucleus.
Nerve cells send chemical signals across gaps in each neuron and between neighboring neurons	Skin cells maintain a semi-permeable barrier between the interior and exterior of a the organism's environment