Vocabulary Strategies Using Interactive Notebooks

Compiled by Sally Creel
K-5 Science Supervisor, Cobb County Schools
Sally.creel@cobbk12.org

*A complete list of idea sources is concluded at the end of this resource.*
# Knowledge Rating Scale

<table>
<thead>
<tr>
<th>Word</th>
<th>Know It Well</th>
<th>Have Heard/Seen It</th>
<th>No Clue</th>
</tr>
</thead>
<tbody>
<tr>
<td>embryo</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>nymph</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>larva</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>pupa</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>amphibian</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>gills</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>tadpole</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Mammal</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Instinct</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

Source: Academic Vocab In Science p.80
<table>
<thead>
<tr>
<th><strong>Word:</strong> Invertebrate</th>
</tr>
</thead>
</table>

**Definition:** Write a definition of the word.  
Animal without a backbone.  

**Sentence:** Write a sentence using the word.  
Approximately 97% of all animals on Earth are invertebrates.  

**Synonyms:** Write synonyms of the word.  
Examples:  
Insects  
Snails  
Mollusks  

**Antonyms:** Write antonyms of the word.  
Vertebrate  
Backbone  

**Context:** Create an example of where the word might be seen or heard.  
In a science book or non-fiction book about spiders or "bugs."  

**Picture:** Draw a picture of the word.  
[Drawings of a spider, jellyfish, insect, millipede]  

**Graphic Organizer:** Develop a graphic organizer about the word.  
[Diagram showing relationships between invertebrates, worms, sponges, mollusks, arthropods, spirited-skinned animals]
<table>
<thead>
<tr>
<th>Synonyms:</th>
<th>dead, non-living</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antonyms:</td>
<td>alive, living</td>
</tr>
<tr>
<td>Word:</td>
<td>extinct</td>
</tr>
<tr>
<td>Other Forms of Word:</td>
<td>extinction, extinguished, extinguisher</td>
</tr>
<tr>
<td>Sentence in Text:</td>
<td>Scientists have learned a lot about extinct animals such as dinosaurs by studying their fossils.</td>
</tr>
<tr>
<td>Original Sentence:</td>
<td>Endangered animals may become extinct if we do not work to protect them.</td>
</tr>
<tr>
<td>Picture:</td>
<td>Saber-toothed cat</td>
</tr>
<tr>
<td>Write the word.</td>
<td>Write an example sentence using the word.</td>
</tr>
<tr>
<td>----------------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td>adaptation</td>
<td>Some animals develop adaptations to help them survive in harsh weather or environments.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Define the word.</th>
<th>Tell what the word is like.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A change or adjustment in structure or habits in which a species improves its condition in relationship to its environment.</td>
<td>Changes or modifications Like we wear shorts and t-shirts in the summer to keep our bodies from getting too hot.</td>
</tr>
</tbody>
</table>
**Word Associations**

**Vocabulary List**
- effect
- friction
- reinforce
- magnitude

<table>
<thead>
<tr>
<th>Word Association Question</th>
<th>Vocabulary Word</th>
</tr>
</thead>
<tbody>
<tr>
<td>Which word goes with <strong>outcome</strong>?</td>
<td>effect</td>
</tr>
<tr>
<td>Which word goes with <strong>resistance</strong>?</td>
<td>friction</td>
</tr>
<tr>
<td>Which word goes with <strong>size</strong>?</td>
<td>magnitude</td>
</tr>
</tbody>
</table>

Source: Academic Vocab in Science p. 144
Keyword Method

Vocabulary Word: Evaporation

Keyword Statement: Evaporation is the process by which a liquid is converted into vapor.

Source: Academic Vocab in Science p.152
<table>
<thead>
<tr>
<th>Words</th>
<th>Context Clues in Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>geologist</td>
<td>&quot;Geologists use technology to study how pieces of Earth move around.&quot;</td>
</tr>
<tr>
<td>meteorologist</td>
<td>&quot;Meteorologists use technology to study weather.&quot;</td>
</tr>
<tr>
<td>technology</td>
<td>&quot;Technology is a tool scientists use to gather and share information.&quot;</td>
</tr>
<tr>
<td>bio technology</td>
<td>&quot;Scientists use biotechnology to make medicines.&quot;</td>
</tr>
</tbody>
</table>
**Definition**
When a substance is changed into a different substance.

**Characteristics**
1. Dramatic Energy Change - (temperature)
2. Color Change
3. Formation of a gas
4. Production of an odor
5. Precipitate Formation
   - (solid during chem reaction)

**Examples**
- Rusting nails
- Fireworks
- Leaves changing color

**Non-Examples**
- Cutting your hair
- Freezing water
- Tearing your pants
A blind man at my Church plays the drums.

Sound (n)

When a drummer plays a snare drum, the drumhead vibrates and creates sound waves.

Source: Academic Vocabulary in Science p. 186
List, Group, Label

**List:**
- maple
- cosmos
- grass
- daffodil
- lavender
- aspen
- gerbera
daisy
- marigold

**Topic: Plants**

- dianthus
- shrub
- petunia
- salvia
- flower
- evergreen
dogwood
- pine
- geranium
- ash
- tulip
- tree
- olive
- aster
- iris
- day lily

---

**Perennials**
- lavender
- day lily
- geranium
- gerbera
daisy

**Annuals**
- aster
- dianthus
- cosmos
- marigold
- petunia
- salvia

**Trees**
- maple
- olive
dogwood
- evergreen
- pine
- aspen
- ash

**Bulbs**
- tulip
daffodil
- iris
<table>
<thead>
<tr>
<th>Statement</th>
<th>How Can You Find Out?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. All magnets have 2 poles.</td>
<td>I can read a book on magnets or google it.</td>
</tr>
<tr>
<td>✓ agree            ___ disagree</td>
<td></td>
</tr>
<tr>
<td>___ it depends on               ___ not sure</td>
<td></td>
</tr>
<tr>
<td>My thoughts:                  I've seen them with two ends.</td>
<td></td>
</tr>
<tr>
<td>2. All metals are attracted to magnets.</td>
<td>I can test a whole bunch of metals and see which ones are attracted.</td>
</tr>
<tr>
<td>___ agree            ___ disagree</td>
<td></td>
</tr>
<tr>
<td>___ it depends on               ___ not sure</td>
<td></td>
</tr>
<tr>
<td>My thoughts:                  I can't pick up money; it's metal.</td>
<td></td>
</tr>
<tr>
<td>3. Larger magnets are stronger than smaller magnets.</td>
<td>I can test the magnets in the magnet center.</td>
</tr>
<tr>
<td>✓ agree            ___ disagree</td>
<td></td>
</tr>
<tr>
<td>___ it depends on               ___ not sure</td>
<td></td>
</tr>
<tr>
<td>My thoughts:                  Bigger things are always stronger.</td>
<td>I can also do research on the computer.</td>
</tr>
<tr>
<td>4. Magnetism can pass through metals.</td>
<td>I can look up &quot;magnetism&quot; and ask my teacher another way to say this.</td>
</tr>
<tr>
<td>___ agree            ___ disagree</td>
<td></td>
</tr>
<tr>
<td>___ it depends on               ✓ not sure</td>
<td></td>
</tr>
<tr>
<td>My thoughts:                  I don't know what this is asking.</td>
<td></td>
</tr>
</tbody>
</table>

Source: Science Formative Assessments p. 49
Vocabulary Diagram

People or Things
- plants
- paper
- things made from plants

Related Words
- biology
- degrade
- biosphere
- graduate

Drawing
- NEWS

Synonyms
- green, ecological
- environmentally friendly
- decompose

Antonyms
- non-biodegradable
- permanent

Word
- biodegradable
- Part of Speech
- adjective

Parts
- bio = life
- de = down
- grad = step/grade
- able = can be

Sentence from Text
Material that is biodegradable decomposes with the help of microorganisms because it is made of organic material.

Original Sentences
The new sunchips bag is biodegradable because it is made from plants and decays after 14 weeks.
Concept of Definition Map

**What is it?**
- an animal that eats meat

**What is it like?**
- a wolf because it needs meat to live

**CONCEPT**
- carnivore

**Examples and Illustrations**
- vulture
- lion
- tiger

---

**What is it?**
- an animal that eats only plants

**What is it like?**
- a cow because it only eats hay or grass.

**CONCEPT**
- herbivore

**Examples and Illustrations**
- deer
- turkey
- calf

*Source: Reading Strategies for Science p.50*
DEFINITIONS

**Definition**
The bouncing of light off a surface. The way the light bounces on the

*KNOW*

*opaque*

*reflection*

*transparent*
DEFINITIONS

Definition:
Surfaces that allow most light to pass through
through this ki

Source: Dinah Zike's Foldables... p. 328
Multi-Tab Vocabulary Foldables

HEAT

- Conduction: A force between two surfaces that touch; energy of motion (friction) changes to heat.
- Heat Transfer
- Insulators
- Conductor
- Convection

Another word for heat; it is also the total amount of energy in a substance.
Matchbook Foldables

- asteroid
- planets
- universe
- galaxies

A group of planets and other objects orbiting a star.

A space object that burns and lights up from friction as it falls.

Source: Dinah Zike Foldables p. 1332
Envelope Foldable

Classifying Organisms

1. Kingdom
2. Phylum
3. Species
4. Family
5. Order

Felis
“house cats, cougars, and many others”

Mammalia
“mammals or furry animals that nurse their young”

Source: Dinah Zike Foldables... p. 330
Strategies for Building Academic Vocabulary in Science

http://estore.seppub.com/estore/product/50129
Reading Strategies for Science

http://estore.seppub.com/estore/product/50053
Dinah Zike Foldables
Book

Foldables, Notebook Foldables, and VKVs for Spelling and Vocabulary 4th-12th

This incredible 432-page photographic reference book contains over 1,600 color photos of Foldables, Notebook Foldables and VKVs (Visual Kinesthetic Vocabulary). It is organized alphabetically, with sections including abbreviations, acronyms, analogies, antonyms, clipped words, root words, synonyms, and more with extensive word lists in each section. Spelling rules are noted in red within the word lists and throughout the book; special word lists presented in Venn diagram format to graphically illustrate relationships between sounds and different spellings. Includes Foldables instructions and VKV folding instructions! An amazing resource!

Quantity: 1 [Add to Cart] [View Cart] [Check Out]