

**Expert Pack: Knowing Muscles and Keeping Them Healthy**

Submitted by: Clark County School District

Grades: 2-3

Date: March 2015

**Topic/Subject**

What are muscles and how can I keep them healthy?

**Texts/Resources**

Sets may include a number of different types of resources. Include up to 12 – 15 resources total.

**Book(s)**

1. *Get Moving: Tips on Exercise*
2. *Keeping Fit: Body Systems*
3. *The Muscular System*
4. *The Skeletal and Muscular Systems: How Can I Stand on My Head?*

**Article(s)**

5. "The Human Body Hiccups"
6. "What Causes Hiccups"
7. "What Do Kids Know About Health?"

**Video/Song(s)**

8. "Alive with 5" [song]
9. "I Choose My Plate" [video]
10. "Muscular System " [video]

**Other Media**

11. Let's Move! America's Move to Raise a Healthier Generation of Kids [website]
12. My Plate Kids' Place [interactive website]

Each expert pack contains a variety of selections grouped to create as coherent and gradual a learning process for students as possible, generally beginning with lower levels as measured by quantitative and qualitative measures, and moving to more complex levels in the latter selections. This graded approach helps support students' ability to read the next selection and to become 'experts' on the topic they are reading about.

*Refer to annotated bibliography on the following pages for the suggested sequence of readings.*

**Rationale and suggested sequence for reading:**

This expert pack is an introduction to the study of muscles, the different types of muscles and how to keep muscles healthy. In the first articles, "The Human Body Hiccups" and "What Causes Hiccups" students are introduced to muscle spasms. The next resource, "Muscular System," is an informational video which explains the three different types of muscles and their function. The students then will read two books, "Muscular System" and "The Skeletal and Muscular Systems: How Can I Stand on My Head?" and gain information about the skeletal muscles. This leads into how to keep muscles strong and healthy. At this point students will then read and do activities that incorporate health and the need for exercise. The next resource, "Get Moving: Tips on Exercise," discusses different types of exercise and the overall health benefits of being active. The students will use the interactive website, My Plate Kids' Place, to learn about the food groups and then build their own healthy plate. Then the students will read the online article, "What Do Kids Know About Health?" and then take a survey to quiz their Health IQ. Next, students will read the book, "Keeping Fit: Body Systems to learn more detailed information about muscles and fitness. Finally, the culminating activity will be for the students to make their own pledge and support the First Lady's Initiative Let's Move! America's Move to Raise a Healthier Generation of Kids.

### The Common Core Shifts for ELA/Literacy:

1. Regular practice with complex text and its academic language
2. Reading, writing and speaking grounded in evidence from text, both literary and informational
3. *Building knowledge through content-rich nonfiction*

Though use of these expert packs will enhance student proficiency with most or all of the Common Core Standards, they focus primarily on Shift 3, and the highlighted portions of the standards below.

### College and Career Readiness Anchor Standards for Reading Literary and/or Informational Texts (*the darkened sections of the standards are the focus of the Expert Pack learning for students*):

1. ***Read closely to determine what the text says explicitly and to make logical inferences from it;*** cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
2. ***Determine central ideas or themes of a text and analyze their development;*** summarize the key supporting details and ideas.
10. **Read and comprehend complex literary and informational texts independently and proficiently**

### Content Standard(s):

This correlates with the following National Health Education Standards:

Students will demonstrate the ability to:

Access valid information and products and services to enhance health. (Standard 2)

Use decision-making skills to enhance health. (Standard 5)

Use goal-setting skills to enhance health. (Standard 6)

### **Annotated Bibliography** and suggested sequence for reading

#### 590L “The Human Body Hiccups” (Pair with “What Causes Hiccups”)

Author: Unknown

Genre: Non-fiction; descriptive article

Length: 206 words

Synopsis: The author explains why we get hiccups, noting that hiccups are just contractions of muscles below the lungs.

Citation: The Human Body – Hiccups. (n.d.). Retrieved January 7, 2015 from

<http://www.readworks.org/passages/human-body-hiccups>

Cost/Access: \$0.00 Free Membership <http://www.readworks.org/passages/human-body-hiccups>

Recommended Student Activities: Wonderings

**1050L “What Causes Hiccups” (Pair with “The Human Body Hiccups”)**

Author: Rupal Christine Gupta, MD (reviewed by)

Genre: Non-fiction; descriptive article

Length: 291 words

Synopsis: Students can read or listen, in English or Spanish, to an article that explains why we get hiccups, noting that hiccups are just contractions of muscles below the lungs.

Citation: What Causes Hiccups. (2014). Retrieved February 4, 2015 from <http://kidshealth.org/en/kids/hiccup.html?ref=search&WT.ac=msh-p-dtop-en-search-clk>

Cost/Access: \$0.00

Recommended Student Activities: Wonderings

**N/A “Muscular System”**

Author: KidsHealth.org

Genre: Informational Video

Length: 7:06 minutes (only watch up to 3:50)

Synopsis: This video cartoon teaches about the three types of muscles and their functions.

Citation: N/A. (2012, August 3). *Muscular System* [Online Video]. KidsHealth. Retrieved from

[http://www.youtube.com/watch?v=C6u0u\\_59UDc&feature=youtu.be](http://www.youtube.com/watch?v=C6u0u_59UDc&feature=youtu.be)

Cost/Access: [http://www.youtube.com/watch?v=C6u0u\\_59UDc&feature=youtu.be](http://www.youtube.com/watch?v=C6u0u_59UDc&feature=youtu.be)

Recommended Student Activities: A Picture of Knowledge

**624L *The Muscular System***

Author: Rebecca Olien

Genre: Informational

Length: 24 pages

Synopsis: Learn about the muscular system’s job, problems that may arise, and how to keep muscles healthy.

Citation: Olien, R. (2006). *The Muscular System*. Mankato, MN: Capstone Press.

Cost/Access: \$0.99+

Recommended Student Activities: Pop Quiz

**593L** *The Skeletal and Muscular Systems: How Can I Stand on My Head?*

Author: Sue Barraclough

Genre: Informational

Length: 32 pages (only read pages 18-29)

Synopsis: This book describes how the bones support and protect your body and how the muscles help you move and keep your body's organs working.

Citation: Barraclough, S. (2008). *The Skeletal and Muscular Systems: How Can I Stand on my Head?* Chicago, IL: Heinemann Library.

Cost/Access: \$19.99

Recommended Student Activities: Quiz Maker

**514L** *Get Moving: Tips on Exercise*

Author: Kathy Feeny

Genre: Informational

Length: 24 pages

Synopsis: This is an introduction to the benefits of exercise, including warming up, drinking water, muscle strength, and eating right.

Citation: Feeny, K. (2001). *Get Moving: Tips on Exercise*. Mankato, MN: Bridgestone Books.

Cost/Access: \$10.22

Recommended Student Activities: A Journal Reflection based on completing activity in text (page 22)

**N/A** "My Plate Kids' Place"

Author: Unknown

Genre: Website

Length: N/A

Synopsis: My Plate is the current nutrition guide published by the United States Department of Agriculture, a food circle (i.e. a pie chart) depicting a place setting with a plate and glass divided into five food groups. It replaced the USDA's My Pyramid guide on June 2, 2011, ending 19 years of USDA food pyramid diagrams. My Plate will be displayed on food packaging and used in nutrition education in the United States.

Citation: My Plate Kids' Place [website]. Retrieved January 7, 2015 from <http://www.choosemyplate.gov/food-groups/>

Song: My Plate Kids' Place. (n/a). Alive with five groups [Audio file]. Retrieved from <http://www.choosemyplate.gov/kids/downloads/Song-alivewithfive.mp3>

### **“My Plate Kids’ Place” continued**

Video: My Plate Kids’ Place. (2011, November 10). My plate tips: Eating more fruits and vegetables when away from home [Video file]. Retrieved from <http://fruitsandveggies.challengepost.com/submissions/5280-myplate-tip-eating-more-fruits-and-vegetables-when-you-re-eating-away-from-home>

Cost/Access: <http://www.choosemyplate.gov/food-groups/>

Recommended Student Activities: Blast Off  
<https://www.fns.usda.gov/blastoff>

### **820L “What Do Kids Know About Health?”**

Author: Suzanne Zimbler

Genre: Non-fiction

Length: 590 words

Synopsis: Survey findings on how knowledgeable kids are when it comes to health-related issues: fitness, nutrition, and healthy habits.

Citation: Zimbler, S. (2011, May 2). What Do Kids Know about Health?. *Time for Kids*. Retrieved from <http://www.timeforkids.com/news/what-do-kids-know-about-health/11691>

Cost/Access: <http://www.timeforkids.com/news/what-do-kids-know-about-health/11691>

Recommended Student Activities: Health IQ <http://kh.poll daddy.com/s/health-q-quiz> (Students should be encouraged to do multiple readings of the text and be able to reference the text while taking the quiz.)

### **873L *Keeping Fit: Body Systems***

Author: Carol Ballard

Genre: Informational

Length: 24 pages

Synopsis: Describes how to get active, enjoy exercise, and keep the body healthy, includes identifying which foods provide energy, why water is important, and which exercises are best for the heart.

Citation: Ballard, c. (2008). *Keeping Fit: Body Systems*. Chicago, IL: Heinemann Library.

Cost/Access: \$24.24

Recommended Student Activities: A Journal Reflection based on completing Steps to Follow activities within the text

**N/A “Let’s Move! America’s Move to Raise a Healthier Generation of Kids”**

Author: N/A

Genre: Informational Website

Length: N/A

Synopsis: Let’s Move! is a comprehensive initiative, launched by the First Lady, dedicated to solving the problem of obesity within a generation, so that children born today will grow up healthier and able to pursue their dreams. The website provides information on the initiative itself including how one can join, nutrition, and physical activity.

Citation: Kids Take Action: 5 simple steps to success [PDF].

<https://letsmove.obamawhitehouse.archives.gov/sites/letsmove.gov/files/pdfs/KidsTakeActionAccessible.pdf>

Cost/Access: \$0.00 <https://letsmove.obamawhitehouse.archives.gov/>

Recommended Student Activities: Make a Pledge

## Supports for Struggling Students

By design, the **gradation of complexity** within each Expert Pack is a technique that provides struggling readers the opportunity to read more complex texts. Listed below are other measures of support that can be used when necessary.

- Provide a brief **student-friendly glossary** of some of the academic vocabulary (tier 2) and domain vocabulary (tier 3) essential to understanding the text
- Download the Wordsmyth widget to classroom computers/tablets for students to access student-friendly definitions for unknown words. <http://www.wordsmyth.net/?mode=widget>
- Provide brief **student friendly explanations** of necessary background knowledge
- Include **pictures or videos** related to the topic within and in addition to the set of resources in the pack
- Select a small number of texts to **read aloud** with some discussion about vocabulary work and background knowledge
- Provide **audio recordings** of the texts being read by a strong reader (teacher, parent, etc.)
- **Chunk the text** and provide brief questions for each chunk of text to be answered *before* students go on to the next chunk of text
- Pre-reading activities that focus on the **structure and graphic elements** of the text
- Provide **volunteer helpers** from the school community during independent reading time.

## Why Text Sets Support English Language Learners

Those acquiring English as a second language have to learn many words in English to catch up with their English-only peers. Vocabulary builds at a much quicker pace when reading a set of connected texts. Text sets are an adaptable resource perfect for building knowledge and vocabulary. Student use of text sets can vary in terms of independence or teacher supports based on the individual needs of the students in the room. Activities found within the text set resources reflect several best practices for English Language Learner instruction including:

- Providing brief, engaging texts that provide a high volume of reading on a topic.
- Providing web-based resources and/or videos that are tied to the content of the texts students are reading.
- Providing opportunities for students to learn new vocabulary through the use of student-friendly definitions in resource-specific glossaries.
- Allowing for options to reinforce newly learned vocabulary and/or content through graphic organizers.
- Providing opportunities for students to reinforce new vocabulary through multi-modal activities including written work, group discussion, viewing visual content, and reading texts that feature the vocabulary.

Teachers of ELLs may use the protocols on the following pages to provide additional support to students who are struggling to access the content within text sets because they are new to English.

## ELL Text Set Protocol Grades K-2

The protocol below assumes that students will be engaged in reading text sets with the support of the teacher and/or another adult staff member. This can be done full class, or in small groups, but will likely require adult support in this grade band.

Please note that this protocol includes options for teachers. This includes the order in which various activities (steps) take place. Individual decisions should be made considering the needs of the students and the demands of the content, keeping in mind that the goal of each scaffold is to allow students to meaningfully access each text and move toward independent, knowledge-building reading.

### **Step one: Build knowledge and vocabulary as you build student interest and engagement in the topic.**

Introduce students to the overall topic/content of the text set, including knowledge demands needed to engage in the content, and domain-specific vocabulary necessary for comprehension. This should be done prior to engaging with the texts themselves – time allotted to this activity should reflect student needs (anywhere from 5 minutes prior to reading, to a full day’s lesson is appropriate).

*Options for this step include:*

- Engage students in reading and discussing auxiliary texts and resources (illustrations, photographs, video clips) on the topic of the text set.
- Pre-teach a few key content-specific terms prior to students engaging with a text set. (Ideas for text-focused vocabulary instruction can be found [here](#).)
- Provide a student-friendly glossary prior to reading each text, with picture support where possible.

If pairing the text set with a [Read Aloud lesson](#), giving students access to the resources in the text set can help build their knowledge and vocabulary prior to engaging with the anchor or primary text, as can access to the resources alongside subsequent reads of the anchor text. The “juicy sentence” discussion is a strategy developed by Dr. Lily Wong Fillmore to help students learn to deconstruct and reconstruct sentences, and to understand how different language features contribute to meaning. Teachers should use the [juicy sentence guidance](#) to dig deeply into a sentence or phrase within the read aloud book, to build vocabulary, deepen content knowledge, and support understanding of syntax and grammar. Juicy sentence work should not be done for the other texts in the text set, since the purpose is for students to work rapidly through a high volume of reading to build knowledge.

### **Step two: Read text orally.**

Focusing on one resource at a time, allow students to listen to a fluent read of the resource.

*Options for this step include:*

- Have the teacher model the first read of a text or resource.
- Use recordings of the text to provide additional opportunities to hear expert reading.

### **Step three: Engage in group discussion about the content.**

Allow students time in partnerships or small groups to discuss the content of the resource.

*Options for this step include:*

- Allow for discussion/conversation (in the students’ home language if possible) with a small group of students reading the same text set prior to writing or provide heterogeneous language groupings to talk about content and discuss what students are learning.
- Provide opportunities to practice using newly acquired vocabulary in the context of discussion.
- Have students refer to the student-friendly glossary included with each passage to identify meanings for new vocabulary necessary for comprehension.

### **Step four: Write about what was read.**

*Options for this step include:*

- Use the “Rolling Knowledge Journal” and/or “Rolling Vocabulary Journal” as a shared writing routine.



- Have students complete the “Rolling Knowledge Journal” and/or “Rolling Vocabulary Journal” as independent graphic organizers that help to scaffold the writing process and capture student knowledge over time. Encourage students to use a combination of writing and drawing.
- Provide students with several supports to help students engage in writing/drawing about what they read:
  - Use mentor texts about which students can pattern their writing.
  - Allow them to write collaboratively.
  - Show students visual resources as prompts, etc.
  - Provide language supports such as strategically chosen sentence starters.

**Repeat steps one through four with each resource in the text set as appropriate.**

## ELL Text Set Protocol Grades 3-12

The goal of text sets is to help students build knowledge through a volume of independent reading, and it is important that educators provide scaffolds to allow English Language Learners to be successful in engaging meaningfully with the texts, even as students are still developing English language skills. The protocol below can be used for teaching with text set resources as a full class. Students can also be trained on the protocol so that they can utilize text sets in small groups or partnerships as a resource for independent or reciprocal reading and study.

Please note that this protocol includes options for teachers. Individual decisions should be made considering the needs of the students and the demands of the content, keeping in mind that the goal of each scaffold is to allow students to meaningfully access the text and move toward independent, knowledge-building reading.

### **Step one: Build knowledge and vocabulary.**

Introduce students to the overall topic/content of the text set, including knowledge demands needed to engage in the content, and domain-specific vocabulary necessary for comprehension. This should be done prior to engaging with the texts themselves; time allotted to this activity should reflect student needs (anywhere from 5 minutes prior to reading, to a full day’s lesson is appropriate).

*Options for this step include:*

- Engage students in reading and discussing auxiliary texts (of lesser complexity) and resources (illustrations, photographs, video clips) on the topic of the text set.
- Pre-teach a few key content-specific terms prior to students engaging with a text set. (Ideas for text-focused vocabulary instruction can be found [here](#).)
- Provide the student-friendly glossary included in the text set prior to reading each text.
- When possible, allow students to read texts in their home language about the topic under study.

### **Step two: Read text orally.**

Focusing on one resource at a time, allow students to listen to a fluent read of the resource, while following along with their own copy of the text.

*Options for this step include:*

- Have a fluent reader model the first read of a text or resource.
- Have students engage in a buddy/partner read.
- Use recordings of the text to provide additional opportunities to hear expert reading.

### **Step three: Engage in group discussion about the content.**

Allow students time in partnerships or small groups to discuss the content of the resource.

*Options for this step include:*

- Allow for discussion/conversation (in the students' home language if possible) with a small group of students reading the same text set prior to writing or provide heterogeneous language groupings to talk about content and discuss what students are learning.
- Have students refer to the student-friendly glossary included with each text set to identify meanings for new vocabulary necessary for comprehension.

**Step four: Write about what was read.**

*Options for this step include:*

- Use the “Rolling Knowledge Journal” and/or “Rolling Vocabulary Journal” as a shared writing routine/ graphic organizer to help to scaffold the writing process and capture student knowledge over time.
- Provide students with several supports to help students engage in writing/drawing about what they read:
  - Use mentor texts about which students can pattern their writing.
  - Allow them to write collaboratively.
  - Show students visual resources as prompts, etc.
  - Provide language supports such as strategically chosen sentence starters.

**Repeat steps one through four with each resource in the text set as appropriate.**

## Text Complexity Guide

“What Do Kids Know About Health?” by Suzanne Zimbler

### 1. Quantitative Measure

Go to <http://www.lexile.com/> and enter the title of the text in the Quick Book Search in the upper right of home page. Most texts will have a Lexile measure in this database. You can also copy and paste a selection of text using the Lexile analyzer.

820 L
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2-3 band	420 -820L
4-5 band	740 -1010L
6-8 band	925 - 1185L
9 -10 band	1050 – 1335L
11 – CCR	1185 - 1385

### 2. Qualitative Features

Consider the four dimensions of text complexity below. For each dimension\*, note specific examples from the text that make it more or less complex.

<p>The purpose of the article is to determine how knowledgeable kids are about health related issues. The findings conclude that kids have a lot of health related knowledge, however, researchers still see room for improvement and identify ways in which they can improve.</p> <p style="text-align: right; font-weight: bold;">Meaning/Purpose</p>	<p>This informational article is clearly organized; headers/sub headers help the students understand the content.</p> <p style="text-align: right; font-weight: bold;">Structure</p>
<p>Although the article is short (590 words), <b>Language</b> Many of the sentences are complex because of their structure; varying sentence lengths and sentences containing dependent clauses like “But to do that, they need information.” Statistical information such as “four out of five” and vocabulary such as “obsessive” also make this text complex.</p>	<p style="text-align: right; font-weight: bold;">Knowledge Demands</p> <p>The subject matter (fitness) should be familiar to students reading the expert pack if the texts have been read in the suggested order.</p>

### 3. Reader and Task Considerations

*What will challenge students most in this text? What supports can be provided?*

- Provide visual representations/models of statistical information (i.e. model using students what nine out of ten looks like).
- Encouraging students to make connections to previous texts could support and deepen understanding.
- Identifying complex sentence features could provide for needed/additional instruction for the class.

\*For more information on the qualitative dimensions of text complexity, visit [http://www.achievethecore.org/content/upload/Companion to Qualitative Scale Features Explained.pdf](http://www.achievethecore.org/content/upload/Companion%20to%20Qualitative%20Scale%20Features%20Explained.pdf)

**Expert Pack: Knowing Muscles and Keeping Them Healthy**

Submitted by: Clark County School District

Grades: 2-3

Date: March 2015

**Learning Worth Remembering**

**Cumulative Activities** – The following activities should be completed and updated after reading each resource in the set. The purpose of these activities is to capture knowledge building from one resource to the next, and to provide a holistic snapshot of central ideas of the content covered in the expert pack. *It is recommended that students are **required** to complete one of the Cumulative Activities (Rolling Knowledge Journal or Rolling Vocabulary) for this Expert Pack.*

**1. Rolling Knowledge Journal**

1. Read each selection in the set, one at a time.
2. After you read *each* resource, stop and think what the big learning was. What did you learn that was new *and important* about the topic from *this* resource? Write, draw, or list what you learned from the text about (topic).
3. Then write, draw, or list how this new resource added to what you learned from the last resource(s).

**Sample Student Response**

<b>Title</b>	<b>Write, Draw, or List</b>	
	<b>New and important learning about the topic</b>	<b>How does this resource add to what I learned already?</b>
1. "The Human Body Hiccups" & "What Causes Hiccups"	Muscle spasms cause hiccups.	
2. "Muscular System"	There are three types of muscles: smooth, cardiac, skeletal.	The muscles that cause hiccups are called involuntary or smooth muscles.
3. <i>The Muscular System</i>	The muscles in my stomach help me to digest my food and the muscles in my blood vessels help move blood through my body.	The muscles that help me digest my food and move my blood are smooth muscles like those that cause hiccups.
4. <i>The Skeletal and Muscular Systems: How Can I Stand on My Head?</i>	Most muscles are attached to the bones with tendons. Tendons are like rubber bands.	The skeletal muscles are those that are attached to my bones. They help me make small movements like smile and large movements like run.
5. <i>Get Moving: Tips on Exercise</i>	Exercise is good for your body. Warming up your muscles is important.	Drinking water and eating right is important for strong muscles.
6. "My Plate Kids' Place"	The 5 food groups are vegetables, protein, fruits, dairy, and grains.	I have to pick healthy foods, like wheat toast instead of sugary cereal, in order to give me the energy I need for the day.
7. "What Do Kids Know About Health?"	Many kids know that it is healthier to drink water than soda.	Being healthy includes eating the right foods and being active.

8. <i>Keeping Fit: Body Systems</i>	Keeping active is one of the best ways of keeping your body fit and healthy.	I learned exercising a muscle makes it stronger including your heart and lungs. Exercises for warming up and cooling down your muscles help avoid injury.
9. "Let's Move! America's Move to Raise a Healthier Generation of Kids"	What I can do at home to be healthier is doing jumping jacks to break up TV time and help my family make dinner.	Now I know what choices I can make to keep my body healthy: exercise, eat healthy, and drink lots of water.

## 2. Rolling Vocabulary: "Sensational Six"

- Read each resource then determine the 6 words from each text that most exemplify the central idea of the text.
- Next use your 6 words to write about the most important idea of the text. You should have as many sentences as you do words.
- Continue this activity with EACH selection in the Expert Pack.
- After reading all the selections in the Expert Pack, go back and review your words.
- Now select the "Sensational Six" words from ALL the word lists.
- Use the "Sensational Six" words to summarize the most important learning from this Expert Pack.

Title	Six Vocabulary Words & Sentences
"The Human Body Hiccups" & "What Causes Hiccups"	<p><b>Words: hiccups, muscle spasms, diaphragm, irritate, lungs, inhale</b></p> <p><b>Sentences:</b></p> <ol style="list-style-type: none"> <li>1. <u>Hiccups</u> usually only last for a few minutes.</li> <li>2. Hiccups are caused by <u>muscle spasms</u>.</li> <li>3. Hiccups start in the <u>diaphragm</u>.</li> <li>4. Eating too much can <u>irritate</u> your diaphragm.</li> <li>5. It rushes air into your <u>lungs</u>.</li> <li>6. When you <u>inhale</u>, it pulls down to help pull air into the lungs.</li> </ol>
"Muscular System"	<p><b>Words: muscles, smooth muscles, myocardium, involuntary, outer covering, inner lining</b></p> <p><b>Sentences:</b></p> <ol style="list-style-type: none"> <li>1. Everyone has over 600 <u>muscles</u> in their body.</li> <li>2. When you throw up, you are using <u>smooth muscles</u>.</li> <li>3. <u>Involuntary</u> muscles work without you even trying.</li> <li>4. <u>Myocardium</u> is also known as your heart muscle.</li> <li>5. Smooth muscles sit between the stomach's <u>outer covering</u> and <u>inner lining</u>.</li> </ol>
<i>The Muscular System</i>	<p><b>Words: Ligaments, Skeletal Muscles, Smooth Muscles, Cardiac Muscles, Nerves</b></p> <p><b>Sentences:</b></p> <ol style="list-style-type: none"> <li>1. Your muscles are connected to the bones with <u>tendons</u>.</li> <li>2. The <u>ligaments</u> are what connect the bones.</li> <li>3. The <u>skeletal muscles</u> are voluntary muscles that move our body and are connected to</li> </ol>

	<p>our bones.</p> <ol style="list-style-type: none"> <li>4. <b>Smooth muscles</b> are involuntary muscles that are found in organs.</li> <li>5. Our heart is <b>cardiac muscle</b> that pumps our blood through our bodies.</li> <li>6. For our muscles to work the <b>nerves</b> that messages from our brain to our muscles.</li> </ol>
<p><i>The Skeletal and Muscular Systems: How Can I Stand on My Head?</i></p>	<p><b>Words: Fibers, contract, relax, strongest, body frame, different muscles</b></p> <p><b>Sentences:</b></p> <ol style="list-style-type: none"> <li>1. Your muscles are made of <b>fibers</b> that make them strong.</li> <li>2. When you tighten your muscles they <b>contract</b>.</li> <li>3. When you contract and <b>relax</b> your muscles you can move different parts of your body.</li> <li>4. The <b>strongest</b> muscle in your body is your jaw muscles.</li> <li>5. The bones and muscles work together to move your <b>body frame</b>.</li> <li>6. You use many <b>different muscles</b> to bend, move, twist, and balance.</li> </ol>
<p><i>Get Moving: Tips on Exercise</i></p>	<p><b>Words: exercise, muscles, flexible, healthy, energy, nutrient</b></p> <p><b>Sentences:</b></p> <ol style="list-style-type: none"> <li>1. <b>Exercise</b> keeps your body healthy and fit.</li> <li>2. Your <b>muscles</b> get stronger when you exercise.</li> <li>3. Warming up your muscles before you exercise helps you become <b>flexible</b>.</li> <li>4. Your body needs <b>healthy</b> food to work well.</li> <li>5. Eating right gives you the <b>energy</b> you need to exercise.</li> <li>6. A <b>nutrient</b> is something that is needed by people, animals, and plants to stay healthy and strong.</li> </ol>
<p>“My Plate Kids’ Place”</p>	<p><b>Words: fruits, vegetables, grains, protein, dairy, oils</b></p> <p><b>Sentences:</b></p> <ol style="list-style-type: none"> <li>1. Commonly eaten <b>fruits</b> are apples, bananas, and oranges.</li> <li>2. Broccoli, kale, and spinach are types of dark green <b>vegetables</b>.</li> <li>3. Popcorn, oatmeal, and brown rice are types of whole <b>grains</b>.</li> <li>4. All foods made from meat, poultry, seafood, beans and peas, eggs, processed soy products, nuts, and seeds are considered part of the <b>Protein</b> Foods Group.</li> <li>5. Cheese, yogurt, and milk are part of the <b>dairy</b> food group.</li> <li>6. <b>Oils</b> are not a food group, but they contain essential nutrients.</li> </ol>
<p>“What Do Kids Know About Health?”</p>	<p><b>Words: healthy, nutrition, active, habits, balanced diet, goals</b></p> <p><b>Sentences:</b></p> <ol style="list-style-type: none"> <li>1. Kids know a lot about staying <b>healthy</b> and they want to learn more.</li> <li>2. About 85% of kids read the <b>nutrition</b> facts on their food packages.</li> <li>3. Health-smart kids know that staying well involves choosing nutritious food and being <b>active</b>.</li> <li>4. Healthy <b>habits</b> include brushing your teeth and washing your hands.</li> </ol>

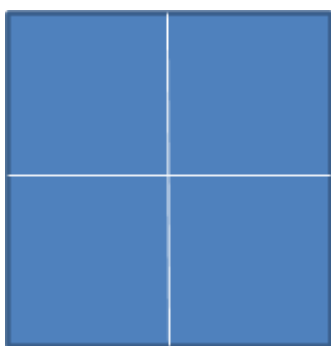
	<p>5. The best way to get a healthy weight is by exercising and eating a <b>balanced diet</b>.</p> <p>6. Most kids say their health is pretty good, but set <b>goals</b> for themselves to become even healthier.</p>
<p><i>Keeping Fit: Body Systems</i></p>	<p><b>Words: Warming Up, fit, pumping blood, breathing, dehydration, 4 S's</b></p> <p><b>Sentences:</b></p> <ol style="list-style-type: none"> <li>1. <b>Warming up</b> your muscles before you start exercising it is important to prevent injury.</li> <li>2. Doing many different types of exercise will keep your body <b>fit</b> and you will have fun.</li> <li>3. Your heart is a muscle that <b>pumps blood</b> and exercise makes your heart muscle stronger.</li> <li>4. Exercising increases your lung capacity for deep <b>breathing</b> that helps your body to use more oxygen.</li> <li>5. When you exercise, your body sweats which can cause <b>dehydration</b> or your body to overheat.</li> <li>6. A good mix of exercises helps you develop the <b>4 S's</b>: speed, stamina, strength, and skills.</li> </ol>
<p>“Let’s Move! America’s Move to Raise a Healthier Generation of Kids”</p>	<p><b>Words: active, physical activity, goals, nutrients, fuel, vitamins</b></p> <p><b>Sentences:</b></p> <ol style="list-style-type: none"> <li>1. Kids need 60 minutes of <b>active</b> play every day.</li> <li>2. <b>Physical activity</b> throughout the day can help you keep a healthy weight and sleep better at night.</li> <li>3. Plan activities with your family and set healthy <b>goals</b> for everyday of the week.</li> <li>4. Bodies need <b>nutrients</b> to grow up healthy.</li> <li>5. To be your healthiest, you need to give your body the right kinds and amounts of <b>fuel</b>.</li> <li>6. Vegetables have the <b>vitamins</b> your body needs to grow up healthy.</li> </ol>
<p><b>Sensational Six</b></p>	<p><b>muscles, exercise, warm-up, healthy, goals, balanced diet</b></p>
<p><b>Summary:</b></p> <p>Each person has over 600 <b>muscles</b> in their body. Muscles help us do things like breathe, eat, and play. In order to have strong muscles, we have to eat <b>healthy</b> and <b>exercise</b>. Eating a <b>balanced diet</b> of the food groups at every meal is one way to stay healthy. Another is to make sure to <b>warm-up</b> before playing so you don’t injure yourself. Setting <b>goals</b> for yourself is a way to achieve a healthy lifestyle.</p>	

### Learning Worth Remembering

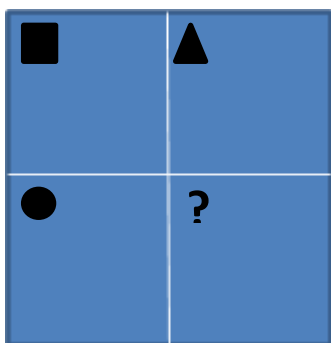
**Singular Activities** – the following activities can be assigned for each resource in the set. The purpose of these activities is to check for understanding, capture knowledge gained, and provide variety of ways for students to interact with each individual resource. Students may complete some or none of the suggested singular activities for each text. Singular activities should be assigned at the discretion of the teacher.

#### 1. A Picture of Knowledge (Recommended for “Muscular System”)

- Take a piece of paper and fold it two times: once across and once top to bottom so that it is divided into 4 quadrants.



- Draw these shapes in the corner of each quadrant.



1. Square
2. Triangle
3. Circle
4. Question Mark

- Write!

Square:	What one thing did you read that was interesting to you?
Triangle:	What one thing did you read that taught you something new?
Circle:	What did you read that made you want to learn more?
Question Mark:	What is still confusing to you? What do you still wonder about?

- Find at least one classmate who has read [selection] and talk to each other about what you put in each quadrant.



**2. Quiz Maker** (Recommended for *The Skeletal and Muscular Systems: How Can I Stand on My Head?*)

- Make a list of # questions that would make sure another student understood the information.
- Your classmates should be able to find the answer to the question from the resource.
- Include answers for each question.
- Include the where you can find the answer in the resource.

Question	Answer
1.	
2.	
3.	

**3. Wonderings** (Recommended for “The Human Body Hiccups”/ “What Causes Hiccups”)

On the left, track things you don’t understand from the article as you read.

On the right side, list some things you still wonder (or wonder now) about this *topic*.

I’m a little confused about:	This made me wonder:

**4. Pop Quiz** (Recommended for *The Muscular System*)

Answer the following questions.

Question	Possible Answer
1. Why is warming up your muscles important before exercising?	Warm muscles helps to prevent injury and less likely to pull a muscle.
2. What is the difference between tendons and ligaments?	Tendons are the strong cords that attach muscles to the bones and ligaments are flat, tough bands that connect bones.
3. How do biceps and triceps work together?	They work together to move your arm. The biceps will pull your lower arm up and the triceps will pull your arm down.
4. What is the difference between a pulled muscle and a sprain?	A pulled muscle is when the muscle was stretched to far and will feel stiff and sore. A sprain is a pulled or torn ligament.

**5. Journal Reflection** (Recommended for *Get Moving: Tips on Exercise*, *Keeping Fit: Body Systems*)

Answer the following questions after completing the activities identified in the texts (Activity on page 22 in *Get Moving: Tips on Exercise* and all Steps to Follow activities in *Keeping Fit: Body Systems*).

How did participating in the activity make you feel?

What do you think would happen if you performed the activity again?

**6. Make a Pledge** (Recommended for “Let’s Move! America’s Move to Raise a Healthier Generation of Kids”)

After reading all of the texts, students will write their own pledge for living a healthy life.

(i.e. I pledge to live a healthy life by eating a meals that have all of the food groups and being active each day.)

**Expert Pack: Knowing Muscles and Keeping Them Healthy**

Submitted by: Clark County School District

Grades: 2-3

Date: March 2015

Expert Pack Glossary

**“The Human Body Hiccups”**

<i>Word</i>	<i>Student-Friendly Definition</i>
Contracting	Contracting is a movement of a muscle that causes it to become tight. <i>When I get scared, my chest tightens because my muscles are contracting. When you get a muscle spasm in your leg, that is your muscle contracting.</i>
Muscle spasm	A muscle spasm is the sudden tightening of a muscle and can sometimes be painful. <i>I had a muscle spasm in my leg and it wouldn't stop twitching. When you get a muscle spasm in your leg, that is your muscle contracting.</i>
Rushes	Rush: to act or move at a high speed. <i>My mom always rushes around in the morning to get us ready for school. When air rushes into the lungs, it causes hiccups.</i>
Valve	A flap or piece on something that controls the flow of fluid. <i>Cars have valves to let the gas into the engine so it runs. The valve in your lungs lets air in and out.</i>

**“What Causes Hiccups”**

<i>Word</i>	<i>Student-Friendly Definition</i>
Diaphragm	A dome-shaped muscle at the bottom of your chest that controls breathing, and all hiccups start here. <i>Eating too quickly can irritate the diaphragm and cause hiccups.</i>
Exhale	To breathe out. <i>When I exhale, I blow the air in my lungs out through my nose.</i>
Inhale	To breathe in. <i>I need to inhale more air when I am running.</i>
Irritate	To bother or upset. <i>It irritates me when my little sister takes my toys. Eating too quickly can irritate the diaphragm and cause hiccups.</i>

**“The Muscular System” [video]**

<i>Word</i>	<i>Student-Friendly Definition</i>
Bones	Bones are the hard pieces that form the frame inside your body. This frame is sometimes called a skeleton. <i>I drink a lot of milk so I have healthy bones. Your bones hold your body up.</i>
Cardiac muscles	The muscle that makes up the heart is called cardiac muscle. It is also known as the myocardium.
Heart/myocardium	The heart is the muscle that pumps blood throughout your body. <i>I was so scared my heart was racing. The heart pumps faster after physical activity.</i>

Involuntary muscles	Involuntary muscles are the muscles in your body that move without you having to think about them or force them to move. <i>An example of an involuntary muscle would be your heart.</i>
Skeletal muscle	Skeletal muscles are the muscles that are attached to your body's frame or skeleton. <i>Skeletal muscles move the body.</i>
Smooth muscle	Smooth muscles — sometimes also called involuntary muscles — are usually in sheets, or layers, with one layer of muscle behind the other. You can't control this type of muscle. Your brain and body tell these muscles what to do without you even thinking about it. <i>The heart is an example of a smooth muscle.</i>
Tendons	Tendons are what connect your muscles to your bones. <i>Tendons are like strong rubber bands that attach your muscles to your bones.</i>
Voluntary muscles	Voluntary muscles are the muscles that you can control and move yourself such as when you smile or run. <i>There are many tiny voluntary muscles in your hands and face.</i>

### **The Muscular System**

<i>Word</i>	<i>Student-Friendly Definition</i>
Automatically	Automatically means done without having to think about it. <i>I automatically wash my plate after I finish my dinner. Breathing is an automatic action.</i>
Biceps	Biceps are the large muscle at the front of the upper arm that bends the elbow. <i>My dad has big biceps because he lifts weights.</i>
Bulging	Bulge - swollen, curve outward, or stick out. <i>His stomach bulged over his belt. My biceps bulge when I flex my arm.</i>
Flexible	Flexible is able to easily bend without breaking. <i>The dog's rubber toys are very flexible. Dancers have very flexible legs.</i>
Involuntary muscles/ Smooth muscles	Involuntary muscles are the muscles in your body that move without you having to think about them or force them to move. <i>An example of an involuntary muscle would be your heart.</i>
Ligaments	Ligaments are a tough band of tissue that connects bones. <i>I sprained my ankle and tore the ligament when I fell.</i>
Nerves	Nerves are the fibers that carry messages to and from the brain and other parts of the body. <i>When you touch a hot pan, your nerves send a signal to your brain to let it go.</i>
Skeletal muscles	Skeletal muscles are the muscles that are attached to your body's frame or skeleton. <i>Skeletal muscles help you run and jump.</i>
Sprain	A sprain is the twisting of a body joint so that ligaments are stretched or torn. <i>When I jumped off the curb, I fell on my ankle and sprained it. If you do not warm your muscles properly, you may be more likely to sprain something.</i>
Triceps	Triceps are a large muscle on the back of the upper arm that straightens the elbow. <i>I want big triceps like my dad.</i>
Voluntary muscles	Voluntary muscles are the muscles that you can control and move yourself. <i>Smiling and running are examples of your voluntary muscles at work.</i>

**The Skeletal and Muscular Systems: How Can I Stand on My Head?**

<i>Word</i>	<i>Student-Friendly Definition</i>
Balance	Balance is the state of being steady in body or mind. <i>The dancer kept his balance while standing on one toe.</i>
Elastic	Elastic is able to return to its original form after being stretched or squeezed. <i>Rubber bands are elastic. Tendons are elastic because they can stretch.</i>
Fibers	Fiber is a small, thin part of a muscle that is shaped like a thread. <i>Large muscles have more fibers than smaller muscles.</i>
Frame	A supporting structure made of parts that are joined together. <i>My mom put my picture in a frame. Your bones are joined together to make your body frame.</i>
Organs	Organ is the part of the body that has a certain job to do. <i>The brain is a very important organ of the body.</i>
Repair	Repair is to put in good condition again after damage has been done. <i>I need to repair the toy my brother broke. Exercising can repair damage done to your body after not doing anything physical for a long time.</i>

**Get Moving! Tips on Exercise**

<i>Word</i>	<i>Student-Friendly Definition</i>
Carbohydrate	Carbohydrates are formed by plants, and are used in the body to easily produce and store energy. <i>Rice and pasta are types of carbohydrates.</i>
Energy	Energy allows people to do everything they need to live, grow, and be active. <i>Energy comes from the food we eat. I get a lot of energy when I eat breakfast. Your body uses energy when it eats and plays.</i>
Nutrient	Something that is needed by people, animals, and plants to stay healthy and strong. Nutrients can be found in several healthy foods that we eat. <i>Healthy foods give my body the nutrients it needs to grow strong.</i>
Vitamin	A nutrient we get in foods we eat that helps keep people healthy. Some foods are known for being rich in certain vitamins. <i>I know that oranges have a lot of Vitamin C and that's an important vitamin that keeps me healthy.</i>

**“My Plate Kids’ Place”**

<i>Word</i>	<i>Student-Friendly Definition</i>
Calories	Calories are just a measurement tool, like inches or ounces. They measure the energy a food or beverage provides. Calories measure the fuel you need to work and play. <i>I eat a lot of calories before I play football so I don't get tired. You can read how many calories are in food by reading the label.</i>
Dairy	All fluid milk products and many foods made from milk are considered part of this food group. <i>Drinking milk and eating other foods from the dairy group keep my bones healthy and strong. Examples of dairy products are milk, yogurt, and cheese.</i>

Fruits	Any fruit or 100% fruit juice counts as part of the Fruit Group. <i>My favorite fruits are strawberries and kiwi. Bananas, oranges, and strawberries are examples of fruits.</i>
Fuel	Fuel is a source of energy. <i>Gasoline is fuel for cars and gives them energy to move. Food is fuel for my body so it can move and grow.</i>
Grains	Any food made from wheat, rice, oats, cornmeal, barley or another cereal grain is a grain product. Bread, pasta, oatmeal, breakfast cereals, tortillas, and grits are examples of grain products. <i>I usually eat cereal at breakfast to get my grains in my diet. Grains are one of the five food groups.</i>
Nutrition	Nutrition means the act of eating the right kind of food so you can grow strong and be healthy. <i>I know that fruits and vegetables have more nutrition than cookies and French fries.</i>
Oils	Oils are not a food group, but they do provide important nutrients. <i>It is important to eat small amounts of oils in order to keep a healthy diet. Too much oil can be unhealthy for you.</i>
Protein	All foods made from meat, poultry, seafood, beans and peas, eggs, processed soy products, nuts, and seeds are considered part of the Protein Foods Group. <i>Eating peanut butter sandwiches is my favorite way of getting my protein in my diet. Protein is one of the five food groups.</i>
Vegetables	Any vegetable or 100% vegetable juice counts as a member of the Vegetable Group. Vegetables may be raw or cooked; fresh, frozen, canned, or dried/dehydrated; and may be whole, cut-up, or mashed. Broccoli, corn, and potatoes are a part of this group. <i>My favorite vegetables are carrots and peas. Vegetables are one of the five food groups.</i>

### “What Do Kids Know About Health?”

<i>Word</i>	<i>Student-Friendly Definition</i>
Achieving	To get or reach something by working hard. <i>I know I am achieving my healthy goals when I choose fruits and vegetable over chips and cookies. Achieving a healthy lifestyle includes eating right and exercising daily.</i>
Active	Doing things that require physical movement and energy. <i>I can stay active by playing outside, riding my bike, or taking my dog for a walk. Playing a sport is a way to be active.</i>
Balanced diet	Choosing healthy foods from all of the food groups. <i>I keep a balanced diet by eating fruits, vegetables, whole grains, meat, and drinking milk. A balanced diet includes eating foods from all of the five food groups.</i>
Fitness	Being in good physical shape. <i>My fitness schedule includes running at soccer practice and taking swim classes. Fitness is an important part of being healthy.</i>
Habits	A usual way of behaving; something that a person does often in a regular and repeated way. <i>My family’s dinner habits include all of us eating together at the table every night. Good eating habits can start as early as when you are a baby.</i>
Issues	Something that people are talking or thinking about. <i>Issues important to me are too much homework and not enough recess. Some serious issues in schools are limited healthy food choices at lunch and limited time for PE.</i>

Obsessive	Thinking about something or someone too much or in a way that is not normal. <i>I choose foods that are healthy for me and once in a while I choose a treat, like ice cream. Worrying too much about choosing healthy foods can be obsessive and not healthy for me. Exercising is important, but too much exercise can be obsessive and unhealthy.</i>
Pediatrician	A doctor who treats babies and children. <i>When my little brother is sick, my mom take him to the pediatrician. A pediatrician can give you information about keeping your body healthy.</i>
Survey	An activity in which many people are asked a question in order to gather information about what most people do or think about something. <i>I gave my classmates a survey to find out their favorite healthy snack. You can survey people to find out things they like or dislike.</i>

### “Let’s Move! America’s Move to Raise a Healthier Generation of Kids”

Word	Student-Friendly Definition
Ambitious	Ambitious means you want to be successful with something. <i>I was too ambitious thinking I could eat an entire pizza by myself. You can set an ambitious goal to exercise every day.</i>
Generation	A generation is a group of people that are about the same age. <i>My generation includes students in grades 1-5.</i>
Ingredients	Ingredients are the things you add together to make a recipe or food. <i>The ingredients you would need to make a pizza would be dough, tomato sauce, and cheese.</i>
Obesity	Obesity means to have too much body fat. <i>People who are overweight are considered obese. America has an obesity problem.</i>
Pledge	A pledge is like a promise. <i>If you pledge to clean your room every day that means you promise to keep your room clean. I will pledge to eat healthy and exercise so I can live a healthy life.</i>

### Keeping Fit: Body Systems

Word	Student-Friendly Definition
Circulate	Circulate is to move or cause to move in a circle or course; especially to follow a course that returns to the starting point. <i>My teacher circulates around the room while we take the test. Your blood circulates through the body.</i>
Paces	A pace is a single step or a measure based on the length of a human step. <i>When I walk next to my dad, I have to walk faster to keep up with his pace.</i>
Pulse rate	Your pulse is the rate at which your heart beats. Your pulse is usually called your heart rate, which is the number of times your heart beats each minute. <i>After I ran around the block, my pulse rate was high. The normal pulse rate for healthy adults ranges from 60 to 100 beats per minute.</i>

Reactions	Reaction is how your body responds to a thing or event. <i>When my mom brought ice cream home, my reaction was to smile and give her a hug. My body's reaction to eating healthy foods is feeling energized.</i>
Sensible	Sensible is showing or containing good judgment or reason. <i>Not eating a bunch of junk food all of the time is being sensible about your diet.</i>
Series	A series is a number of things or events arranged in order and connected by being alike in some way. <i>I didn't do well on my math test because I made a series of mistakes.</i>
Vigorously	Vigorously means to do an action with force and energy. <i>I vigorously shook my piggy bank to get my money out. In order to get my pulse rate up, I moved vigorously on the basketball court.</i>