

Body Systems Unit

Instructional Modifications



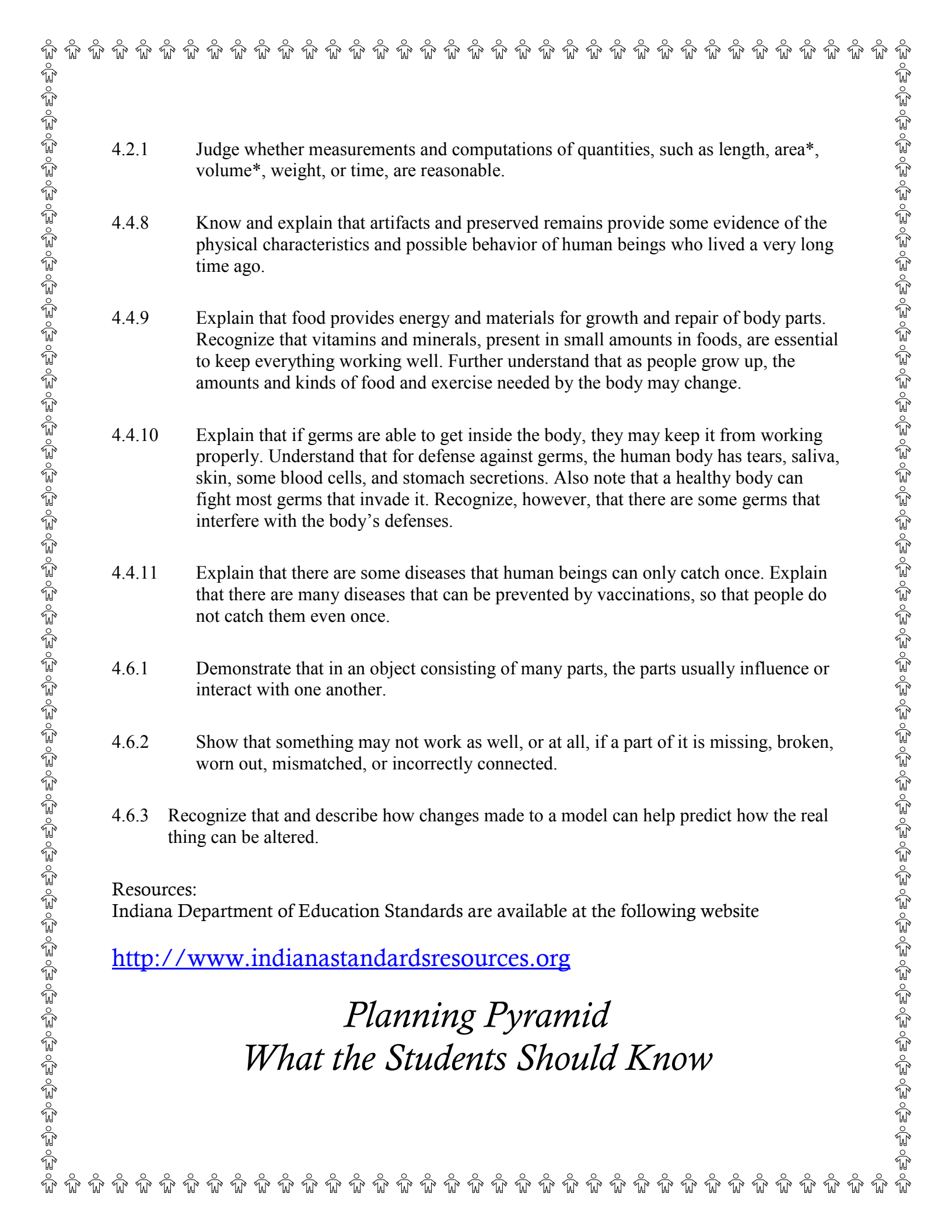
Focusing on 4th Grade
Science Standards

Roachdale Elementary School
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Standards

Indiana State Standards for 4th Grade addressed in this unit:
Science Standards

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- 4.2.1 Judge whether measurements and computations of quantities, such as length, area*, volume*, weight, or time, are reasonable.
- 4.4.8 Know and explain that artifacts and preserved remains provide some evidence of the physical characteristics and possible behavior of human beings who lived a very long time ago.
- 4.4.9 Explain that food provides energy and materials for growth and repair of body parts. Recognize that vitamins and minerals, present in small amounts in foods, are essential to keep everything working well. Further understand that as people grow up, the amounts and kinds of food and exercise needed by the body may change.
- 4.4.10 Explain that if germs are able to get inside the body, they may keep it from working properly. Understand that for defense against germs, the human body has tears, saliva, skin, some blood cells, and stomach secretions. Also note that a healthy body can fight most germs that invade it. Recognize, however, that there are some germs that interfere with the body's defenses.
- 4.4.11 Explain that there are some diseases that human beings can only catch once. Explain that there are many diseases that can be prevented by vaccinations, so that people do not catch them even once.
- 4.6.1 Demonstrate that in an object consisting of many parts, the parts usually influence or interact with one another.
- 4.6.2 Show that something may not work as well, or at all, if a part of it is missing, broken, worn out, mismatched, or incorrectly connected.
- 4.6.3 Recognize that and describe how changes made to a model can help predict how the real thing can be altered.

Resources:

Indiana Department of Education Standards are available at the following website

<http://www.indianastandardsresources.org>

Planning Pyramid

What the Students Should Know



Some students will know:

- Students will know the names of the body systems and be able to tell why each system is important for survival.
- Students will know how body systems interact and will be able to provide examples of body system interactions.
- Students will be able to label 18 out of 18 bones of the skeleton.

Most students will know:

- Students will know that similar cells form different kinds of structures.
- Students will know that it is important to keep accurate records and descriptions to provide information and clues on causes of discrepancies in repeated experiments.
- Students will know the names of the various body systems.
- Students will be able to label 14 out of 18 bones of the skeleton.

All students will know:

- Students will know that the human body is made of systems with structures and functions that are related.
- Students will know that it is important to keep accurate records and descriptions to provide information.
- Students will know that through the use of science processes and knowledge people can solve problems and make decisions.
- Students will be able to label 5 out of 18 bones of the skeleton.

Teacher Library

Internet Resources

Effect of Space on Human Bones-This website has information about the effects of space on the bones of astronauts. It also has video clips to view as well.



http://science.nasa.gov/headlines/y2001/ast01oct_1.htm

This website has an online tour of the human body as well as a list of activities and other websites. It has ideas to incorporate the human body across the curriculum in addition to follow-up activities.

http://www.education-world.com/a_lesson/lesson065

Virtual Body is a website that includes interesting information about the brain, digestive system, heart and skeleton in an interactive format.

<http://www.medtropolis.com/vbody.asp>

This website has online interactive activities about separate components of the body and how they work together.

<http://www.sciencenetlinks.com/matrix.cfm>

Proteacher.com is a website that has several experiments to conduct about the human body.

<http://www.proteacher.com/110025.shtml>

This website has links to sites that explore the systems of the body including animations, diagrams and charts.

http://www.kidinfo.com/Health/Human_Body.html

This website has information about the body systems for upper elementary students. It includes actual lesson plans, activities and assessments.

<http://pegasus.cc.ucf.edu/~mitchell/UnitPlans/NancyJ/NancyJ.html>



Supporting Student Research

Indiana State Standards Resources

A variety of resources that provide standards drive activities.

<http://www.indianastandardsresources.org/standard.asp?Subject=sci&Grade=4&Standard=3>

Learner Activities

Project Poster

A tool that allows the students to create an online poster.

<http://poster.hprtec.org/>

TrackStar

Website that has lessons that the students are able to search and find answers to questions about their given topic.

<http://trackstar.4teachers.org>

Enchanted Learning

Activities on various systems of the body.

<http://www.enchantedlearning.com/subjects/anatomy>

Smartboard

Utilize videos found on the Smartboard to enhance student learning of body systems.

Assessment

There are a variety of ways that you could assess the students on the material in this unit. Some of the suggestions below involve learning activities that create a project that can be used to assess the students learning. For students with disabilities, it will be important to be aware of each student's individual learning needs and testing accommodations as identified in their Individualized Education Plan (IEP). Also, please refer to the "Planning Pyramid" as a guide for grading.

- Have students use the website <http://poster.hprtec.org/> to create an online poster demonstrating their knowledge of body systems.
- Students create a journal of body systems in the activity found at: www.eduref.org
- Students can design a WebQuest by checking out the online resources at <http://webquest/sdsu.edu>
- Visit Kathy Schrock's Guide for Educators site for a variety of assessment and rubric information at <http://school.discovery.com/schrockguide/assess.html>
- Web for Teachers provides a variety of free tools that can assist in the assessment process including QuizStar (for developing online quizzes), RubiStar (for designing rubrics), and a Web Worksheet Wizard (for designing web/based activities). Check out these and other tools at <http://www.4teachers.org/>
- Test Generator to modify test for students. This came with the Scott Foresman Science teacher materials.
- Kurzweil to read tests to students that need to have them read.

Modifications: Planning for Academic Diversity

****It is important to remember to contact your technology department before installing, downloading, or having students access a website. The technology**

department will be able to assist you with any network problems that may arise from installing, downloading, or having student's access websites.

For Students Who Struggle with Reading

There are many ways to meet the needs of students who are struggling to read printed material. Technology is one way to help with this struggle while making the student more independent.

<p><u>ReadPlease 2002</u> (Windows): A text-to-speech application that can be used to read web pages. Will speak any text copied to the clipboard. Also on this sight is a program to read directly a website directly from the internet. Freeware! http://www.readplease.com</p>	<p><u>Write Outloud:</u>(Windows) An easy to use word processor that has ability to read text typed or copied into it. http://www.donjohnston.com</p>	<p><u>Read and Write-Gold:</u> (Windows) Assistive software that works with all Microsoft applications. Can be used for text-to-speech, defining unknown words, homophone assistance as well as other functions. http://www.texthelp.com</p>
<p><u>Kurzweil 3000:</u>(Windows) A program that offers text-to-speech for documents scanned into the program, reading of worksheets and quizzes with the ability to type the answer directly into the document. http://www.kurzweilededu.com</p>	<p><u>Gh Player 2.0:</u> a feature-rich playback application that allows persons with print-disabilities the opportunity to read documents with ease, save time finding information, benefit from flexible reading solutions, and improve reading productivity. http://www.ghbraille.com</p>	<p><u>Autosummarize on Microsoft Word:</u> Found under the TOOLS application of Word, this application allows for a document typed in or scanned to word to be highlighted for the main important points at varying percentage levels.</p>

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For Students Who Struggle with Written Expression

There are many ways to meet the needs of students who are struggling written expression. Technology is one way to help with this struggle while making the student more independent.

<p>Read and Write-Gold: (Windows) Assistive software that works with all Microsoft applications. Can be used for text-to-speech, defining unknown words, homophone assistance as well as other functions.</p> <p>http://www.texthelp.com</p>	<p>Write Outloud:(Windows) An easy to use word processor that has ability to read back what a student has written as well as assist with spelling errors and homophone checks.</p> <p>http://www.donjohnston.com</p>	<p>Kurzweil 3000:(Windows) A program that offers text-to-speech for documents scanned into the program, reading of worksheets and quizzes with the ability to type the answer directly into the document.</p> <p>http://www.kurzweiledu.com</p>
<p>Co:Writer 4000: (Windows) A word prediction program that can be used to support spelling and vocabulary. There is a topic dictionary for access words related to specific topics.</p> <p>http://www.donjohnston.com</p>	<p>Draft:Builder:(Windows) An organizer to support students through the writing process. A variety of templates are available for download from the company's website.</p> <p>http://www.donjohnston.com</p>	<p>Inspiration: Software integrates diagramming and outlining into a powerful program. Can be used to support organizing ideas for writing as well as reading.</p> <p>http://www.inspiration.com</p>