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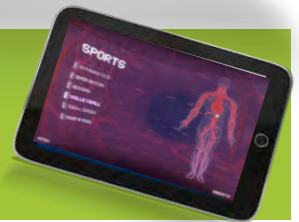
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Issue 5: Anatomy

Websites



Finding cost effective and interesting ways for students to learn and understand the anatomy of the human body can sometimes be challenging.

In this issue links to a number of 'websites, apps', and software programs will be provided.

Anatomy Arcade



Wack-a-Bone <http://www.anatomyarcade.com/games/WAB/WAB.html>

Is an interactive website that enables students to learn the bones of the body in an arcade game format. Students learn the bones by dragging and dropping the bones onto the body in the appropriate place, locating the correct bones for the label provided using a scanner or wacking the bones with a mallet to identify the name of the bone provided.

Poke-a-Muscle <http://www.anatomyarcade.com/games/PAM/PAM.html>

This follows the same arcade game format as the Wack-a-bone but provides a way of learning the muscles.

Jigsaw

<http://www.anatomyarcade.com/games/jigsaws/MuscularJigsaw/muscularJigsaw.html>

This allows you to manipulate the pieces of the puzzle to complete the skeleton so that all the muscles are in the correct location

Crossword / Word Search /Match Two

Are additional ways of learning the names of the bones, muscles, circulatory, respiratory, digestive, nervous and endocrine systems of the body.

<http://www.anatomyarcade.com/games/crosswords.html>

<http://www.anatomyarcade.com/games/wordSearchs.html>

<http://www.anatomyarcade.com/games/matchTwo.html>

Zygote Body <http://zygotebody.com/>

This was formally called Goggle Body and enables 3D views of the different layers of the body to obtain an understanding of the integration of the different body systems. It is possible to start with the skin and peel off the layers to see the underlying bones, muscles and organs for both the male and female anatomy. You can zoom in and rotate 360°s to view the anterior and posterior aspects of the body.

A review of how Zygote Body can be used

<http://www.builtlean.com/2012/03/29/zygote-body/>

Web Anatomy <http://msjensen.cehd.umn.edu/Webanatomy/default.asp>

This site provides a variety of interactive games and quizzes. There are self-tests, timed tests, multiplayer games and quizzes for all the body systems. This is a University based site so some of the activities are basic and some are beyond that required at high school level so selection of the appropriate quiz is required.

BBC interactive Human Body

http://www.bbc.co.uk/science/humanbody/body/index_interactivebody.shtml

You will find a muscle and skeleton game, organs game and a puberty demo. These activities use 3D jigsaw puzzles, or the dragging and dropping of images onto the correct location on a skeleton. There is also animation, video clips and information associated with each part of the body provided.

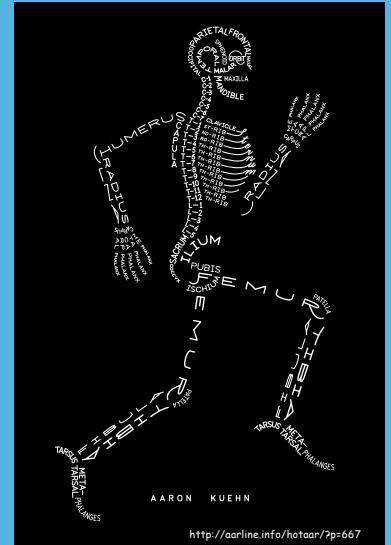
Anatomy Drills and Practice

<http://www.wiley.com/college/apcentral/anatomydrill/>

Students can drag and drop the appropriate anatomical terms of reference into the quiz boxes to learn the terminology. There are also quizzes for bones, muscles, joints, the cardiorespiratory system as well as more in-depth practice for other body systems.

3D science http://www.3dscience.com/3D_Models/Human_Anatomy/index.php

A site that has a gallery of 3D images. Although these are unlikely to be cost effective in a school environment it does allow students to see high quality 3D and cross sectional images on the website.



Websites Continued

Muscle Structure and Contraction

Aspects of these sites relate to both the anatomy and physiology of the muscle.

- Sarcomere shortening animation
http://highered.mcgraw-hill.com/sites/0072437316/student_view0/chapter42/animations.html#
- Actin & Myosin
http://www.wiley.com/college/pratt/0471393878/student/animations/actin_myosin/
- Sliding Filament Animation
<http://www.blackwellpublishing.com/matthews/myosin.html>

The Virtual Heart <http://thevirtualheart.org/>

You are provided with 3D images of the heart as well as more in-depth information about the rhythms, anatomy and a tour of a virtual museum.

Anatronica <http://www.anatronica.com/systems.html>

Interactive 3D anatomy for all the body systems. The online version is free and enables you to rotate to get views from all anatomical places. There is also an android™ app available to use on the move and a quiz.

Build-A-Body SpongeLab http://www.spongelab.com/game_pages/BAB.cfm

Spongelab is a global science community that has digital science content. This is an interactive drag and drop game where students build the human body by selecting the appropriate parts for each body system. If you also happen to teach biology or chemistry there are other games that may be useful such as Animal Anatomy, Biochem Gems, Build-a-cell, Build-a-plant, build-a-tree, Cell Comparison, Knowledge Mine, Transcription Hero. There is a Build-A-Body iPad™ 'app' available.

BioDigital Human <https://www.biodigitalhuman.com/default.html>

This site allows you to explore the body in 3D to look at the anatomy, health conditions and their treatments. It is possible to zoom and orientate the skeleton as well as complete a quiz.

Inner Body <http://www.innerbody.com/htm/body.html>

This website enables students to explore the different body systems by looking at diagrams, animations and descriptions of the different regions.

HealthLine Body Maps <http://www.healthline.com/human-body-maps>

You can look at each of the body systems layer by layer from a 360° view to obtain an understanding of how the body is comprised. To obtain more information students just need to mouse over the region.



Websites Continued

Human Body and Anatomy Sites for Younger Students

Reviews of the following sites can be found:

<http://www.squidoo.com/human-anatomy-kids>

- **The anatomy book**
<http://www.apples4theteacher.com/elibrary/bodybook.html>
An elementary school class have created a book about basic organs and the skeletal system.
- **Body Parts**
<http://e-learningforkids.org/Courses/EN/S0702/index.html>
A narrated interactive tour through the different body systems to explore their functions.
- **Bone Biology for kids**
<http://depts.washington.edu/bonebio/index.html>
- **Human Body pushing the limits**
<http://dsc.discovery.com/tv/human-body/explorer/explorer.html>
A discovery channel site with videos and interactive activities.
- **Explore the Body** is a national geographic site providing information and animation about the brain, heart, digestive system, lungs and skin.
<http://science.nationalgeographic.com/science/health-and-human-body/human-body/>
- **BAM your body**
A Centre for Disease Control and Prevention (CDC) website. An interactive site covering topics such as diseases, food & nutrition, physical activity, safety, emotional health and the body.
http://www.bam.gov/sub_yourbody/index.html

Links to collections of resources

Think Anatomy

<http://thinkanatomy.com/>

A collection of resources that can be searched by category (e.g. games, dissection videos, interactive, apps, podcasts, quiz)

Kid info

http://www.kidinfo.com/health/human_body.html

Information, resources and links to other sites that contain videos, animations and quizzes. Including links to sites such as <http://kidshealth.org/classroom/> which is aimed at younger students with 'How the body works' animated clips and activities.

Online Learning

<http://www.wisc-online.com/ListObjects.aspx>

Quizzes, animations and information on many anatomy and physiology topic areas.

American Association of

Anatomists: Resources List

<http://www.anatomy.org/non-aaa-resourcelinks>

Get Body Smart

<http://www.getbodysmart.com/>

An online anatomy and physiology text book.

Software & 'app's'

Muscle and Motion

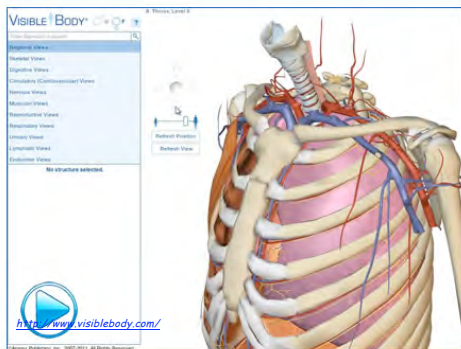
There are two versions of this software

- Muscle and Motion <http://www.muscleandmotion.com/muscle demo.aspx>
- All About Strength Training <http://www.muscleandmotion.com/demo.aspx>

3D analysis of body movements using animations and movie clips enable the user to learn bones, muscles, anatomical planes and the type of exercises that activate each muscle group. The strength exercises are integrated with the functional anatomy of the muscles. There is a free trail available.



Visible Body



<http://www.visiblebody.com/>

Interactive 3D anatomy of the human body that allows you to see layer by layer the body structure by zooming, rotating and panning the image. Definitions and descriptions of the anatomical structures and functions are also provided with each image. It is accessible via subscription, download for PC or Mac™ and 'apps' for iPad™, iPhone™ or android™. It is also possible to test your knowledge with quizzes. There are additional add-ons for other body systems such as muscular or cardiovascular.

Watch: A One-Minute Overview of Visible Body's Features

'app's'

There are many 'apps' available to help with learning the anatomy of the human body.

Here are a few standouts:

iMuscle - interactive, able to zoom and rotate the body to view anterior and posterior. It also suggests resistance exercises that work the muscle identified.

Visible Body - reviewed above. It allows you to email and save screen shots.

Virtual Body - while not as interactive as the two above it enables you to peel away the layers.

Virtual Heart - is a fantastic view of the heart exterior, interior, valves, blood flow and electrical system. A very nice touch is being able to speed up and slow down the heart rate so you can see the affect this has on the heart contraction.

Bones Lite - is a simple, yet effective quiz to help you learn the bones of the body.

