

*BioDigital: Powering the World's Understanding of the Human Body* (<https://www.biodigital.com>)

As teachers continue to deal with the difficulties of instruction during a pandemic, they are increasingly relying on virtual activities to relay content to their students and improve learning experiences. Traditional, in-person learning has shifted into the digital world – whether it be in the form of an app, a website, or some form of simulation – probably for a long time to come.

For those of us teaching anatomy and physiology, or just looking to offset already existing materials with a great digital resource, *BioDigital* has just about everything a student could need. This super-engaging website was designed through a collaboration of medical professionals and virtual designers to create a better 3D way to understand health and the human body. They wanted to make 3D learning accessible to everyone and also improve health literacy. Their ultimate goal was to provide scaffolding that can be used as a map to learn about human health and disease.

To achieve these goals, *BioDigital* has put together a collection of interactive and animated images that can be manipulated by the user. To start, the user selects from the general topics of Anatomy or Specialties. Under the Anatomy heading, users can select how deep they want their coverage to go, investigating by region, system, cross section, or the entire body at once. If Specialties is selected, the user can find

information about such things as neurology and psychiatry, orthopedics, rheumatology, and pediatrics. There are several other topics under this heading as well.

Selecting Anatomy, users are taken to a page where they can select the individual body system they want to study. While generally the same in structure and function, *BioDigital* separates them into male and female. Moving deeper into the system, the anatomy can be seen from its most superficial layers all the way down to its deepest. Users can remove pieces of each system or, when looking at the entire body altogether, entire systems. Once they reach the level of study they want, users click on the individual organs. This action brings up a textbox filled with relevant information about the structure selected. This text can be copied and pasted into other places for future reference. Being able to do this allows the content to be adaptable to the many, varied curricula that schools have.

One particularly neat feature of *BioDigital* is a place called the Human Studio. In this area of the site, the material can be aligned to specific objectives, such as learning the flow of blood through the heart, or the pathway urine takes as it is produced in the kidneys. This feature allows the user to hide, paint, label, and zoom in to show the desired structures. The information collected from the site can be embedded into other applications to be used for presentations or personal learning. It can also be printed once it is exported into another source. Teachers can have their students create a journey through the

body, emphasizing particular structures and writing about how and why they are important.

*BioDigital* is a completely web-based site. This means it will work without the need for plugins or any additional downloads. This is a great thing, as the Flash software, which is currently the standard for this type of interactive website, is being discontinued at the end of 2020. The site is also completely cross-platform, meaning it will work with any web browser on any device. Individuals can sign up for a limited trial of the site that allows access to some of the more popular features. Pricing for access to the complete site is currently under review. COVID-19 has increased demand for access, so the company is revisiting its pricing structure. They do put assurances out, however, that they are more than willing to work with schools (and colleges) based on need and financial hardship.

Study of anatomy and physiology is hard. Any tools that teachers and students can use to make the journey through the human body easier should be welcomed and embraced. *BioDigital* is such a tool. It is an excellent resource for students in high school, college, and even medical school. Teachers will appreciate the customization of the site, while students will learn a lot from the excellent 3D graphics and in-depth text.

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