

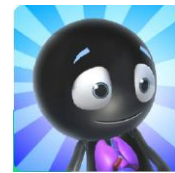
# What's inside my Body!

**Band level:** Years 5 to 6 (Beginner level activities)

**Description:** Students will explore the anatomy of the human body using Augmented Reality and the Merge Cube. This lesson is a deeper look into the **Mr Body** section of the **Merge Explorer** app. Here students can explore the biological structures of organs inside the human body including the brain, heart and lungs.

## Resources:

- iPad, (no internet required)
- Merge cubes
- Mega Merge Cube (optional)
- MERGE Explorer app
- Worksheet



**Prior Student Learning:** Merge Cube Magic lesson one

**What is Augmented Reality?** Augmented reality is using technology to superimpose information such as sounds, images and text onto real world objects that we see. It works by adding the digital content onto a live camera feed, making that digital content look as if it is part of the physical world. This could be anything from making your face look like a dinosaur to overlaying digital directions onto the physical streets around you.

**What is a Merge Cube?** The Merge Cube is a spongy, dense black foam cube with silver markings on all six sides in patterns similar to QR codes. The patterns provide an Augmented Reality trigger that launches when any of the Merge apps are pointed at the cube. It provides a powerful interactive experience in a real world environment where an object (the cube) is enhanced by a 3D digital-generated image that comes to life by using the camera on a digital device.

**What is the Merge Explorer App?** With the MERGE Explorer app students will learn about topics such as earth science, life cycles, the solar system, anatomy, properties of matter, weather and climate, ecosystems and more. The app provides students with an interactive experience in which digital images, sounds and text can be seen on the Merge Cube. Students can investigate a volcano, examine inside the human body, and hold the earth in the palm of their hands. They can even dissect a frog (humanely)!



## Curriculum Links:

<b>Band/Year Level</b>	<b>Digital Technologies Achievement Standard</b> By the end of Year 6, students explain the fundamentals of digital system components (hardware, software and networks) and how digital systems are connected to form networks. Students define problems in terms of data and functional requirements and design solutions by developing algorithms to address the problems.
Year 5 to Year 6	<b>Content Descriptions:</b> <b>Digital Technologies: Knowledge and Understanding</b> Examine the main components of common digital systems and how they may connect together to form networks to transmit data (ACTDIK014)  <b>Digital Technologies: Process and Production skills</b> Define problems in terms of data and functional requirements drawing on previously solved problems (ACTDIP017)
Year 5	<b>Science Achievement Standard</b> By the end of Year 5, students ...analyse how the form of living things enables them to function in their environments. Students discuss how scientific developments have affected people's lives, help us solve problems and how science knowledge develops from many people's contributions.  <b>Content Descriptions:</b> <b>Science Understanding:</b> Living things have structural features and adaptations that help them to survive in their environment (ACSSU043)
Level 4	<b>General Capabilities</b>  ICT Capabilities <ul style="list-style-type: none"> <li>● Locate, generate and access data and information</li> <li>● Select and use hardware and software</li> <li>● Understand ICT systems</li> </ul> Critical and creative thinking <ul style="list-style-type: none"> <li>● Locate, generate and access data and information</li> <li>● Imagine possibilities and connect ideas</li> </ul>



## Whole class activity: Explore Phase

The teacher introduces the students to the Human Body through Augmented Reality and using the **Mr Body** section of the **MERGE Explorer** app (see Attachment A). Explain how the AR happens through the camera of the device and superimposes the image onto the cube. This could be done using the Mega Cube for the whole class to see (see Merge Cube magic Lesson One).

## Group work activity: Play Phase

1. Divide the students into pairs or groups and provide an iPad and merge cube to each.
2. Open the **Merge Explorer** app and navigate to the **Mr Body** section.
3. Read through the topic card information and allow students to explore the internal organs.
4. Interact with each AR activity to explore, discover and learn.
5. Students should be able to answer the following questions.

<p><i>Journey into the Body</i> <b>What organs inside the body help it to survive?</b></p> <p>Students explore the <b>organs inside the human body</b> while they hold and interact with the cube, <b>clicking each organ</b> to find out more. Describe the organs in the body.</p>	<p><i>Transport system</i> <b>What is the role of the heart?</b></p> <p>Students investigate the function of the <b>heart</b> to learn more about circulation. The module will <b>visualize</b> the <b>organs</b> to demonstrate <b>systems</b>. Let students tap on the heart to find out how it works.</p>
<p><i>Moving parts</i> <b>How do the organs work together?</b></p> <p>Students investigate the <b>internal anatomy</b> to learn a little more about inside the body. The module will <b>visualize</b> the <b>organs</b> to demonstrate <b>systems</b>. Let students tap on each one to see more information.</p>	<p><i>Powerhouse</i> <b>What is the role of the human brain?</b></p> <p>Students learn the importance of <b>the brain</b>, and that it is the source of <b>instruction</b> and <b>activity</b> across the human body. They'll hold and describe <b>the brain</b> and see how it connects to all the organs in the body.</p>



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# Mr. Body

## Essential Questions

- How is the body a system of interacting subsystems?
- How are the organs of the body made up of cells?
- How does food move through an organism to support growth or release energy?

## Activity:

1. Have you ever wondered what is going on inside of your body? As humans, we go about our day-to-day activities without giving much thought to what is happening inside of our bodies. Today we will take a look at our internal anatomy. Anatomy is a word for biological (living) structures inside of living things, like us. What do you know about what is inside of you? How do your organs work together? Let's look inside!
2. Using your Merge Cube and Merge Explorer app, access the "Mr. Body" Topic Card. Look at the image at the very top and read the introduction. What do you already know about your body?  
Can you name any organs that you have? Think of organs involved with eating lunch. How do they work together?
3. Press the play button for the Mr. Body AR activity. Here, you can view the organs inside of a body and learn a little bit about each of them.
4. Take a look at where each organ is located in the body. Look at the body from all different angles to get a better understanding.
5. Tap on each organ to view it up close and then tap on the coloured buttons to learn more information about that organ.
6. As you look at Mr. Body, think about the following questions:  
**What does the pancreas do?**  
**How about the kidneys?**  
**Try to follow the digestive system, starting from the stomach through the large intestine. How do you think these organs work together?**  
**What does the brain have to do with the functions of the body?**



## Assessment

1. Video: Record a video where you pretend to teach a kindergarten student all about the human body. What organs are important to mention? What should you tell them about how the organs work together?
2. Class Notebook: Class Notebook: Answer the Essential Questions in your science notebook.

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