**Body Systems Jigsaw**

This cooperative lesson is designed for students in grades 4-8. Students will use the jigsaw strategy to read about the 10 human body systems. Students will become an expert on two systems and then share their knowledge with their peers to collect information about all the systems. Finally, students will use their notes and knowledge to complete a brief assessment about the major functions of each of the 10 body systems.

**Standards:**

**Common Core State Standards:**

* **4th Grade**
  + **CCSS.ELA-Literacy.RI.4.2** – Determine the main idea of a text and explain how it is supported by key details; summarize the text.
  + **CCSS.ELA-Literacy.RI.4.3** – Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.
* **5th Grade**
  + **CCSS.ELA-Literacy.RI.5.2** – Determine two or more main ideas of a text and explain how they are supported by key details; summarize the text.
  + **CCSS.ELA-Literacy.RI.5.3** – Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.
* **6th Grade**
  + **CCSS.ELA-Literacy.RI.6.2** – Determine a central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgements.
* **7th Grade**
  + **CCSS.ELA-Literacy.RI.7.2** – Determine two or more central ideas in a text and analyze their development over the course of the text; provide an objective summary of the text.
* **8th Grade**
  + **CCSS.ELA-Literacy.RI.8.2** – Determine a central idea of a text and analyze its development over the course of the text, including its relationship to supporting ideas; provide an objective summary of the text.

**Objectives:**

* Students will be able to determine the main idea and supporting details of a text.
* Students will be able to identify and distinguish the functions of 10 organ systems found within the human body.

**Lesson Duration:** approximately 55-80 minutes

**Materials:**

* Scratch Paper
* Pencil
* Marking the Text Guide
* Human Body Article
* Optional: Human Body Challenge Article
* Body Systems Note-Taking Guide
* Body Systems Worksheet
* Body Systems Answer Key

**Requisite Prior Knowledge:**

* Before engaging in this lesson, it would be beneficial for students to have read the Building Blocks of the Human Body Cells to Organ Systems book. In this book, students are introduced to our major organ systems and their functions. Students should understand that humans are made of cells, that cells work together to form tissues, and that tissues work together to form organs that serve specific functions. Students should also know that the body is made of many systems of organs that work together.
* If students have not completed a jigsaw task before, it might be helpful to review the procedures prior to engaging in the lesson.

**Assessments:**

* Note-Taking Guide
* Body Systems Worksheet
* Students’ annotated text

**Vocabulary:**

* Cell – the basic unit of all living things
* Tissue – a group of similar cells that do a certain job
* Organ – two or more tissues that work together to do a certain job
* Organ System – two or more organs that do a common task
* The Circulatory System – the group of organs that carries blood through the body
* The Digestive System – the group of organs that breaks down and absorbs food in the body
* The Urinary System – the group of organs that removes wastes from the body
* The Endocrine System – the group of organs that produces hormones
* The Reproductive System – the system of organs that allows human beings to create more of their own kind
* The Nervous System – the group of nerves and organs that controls all activities in the body
* The Respiratory System – the group of organs that brings oxygen into the body and removes carbon dioxide
* The Skeletal System – the entire collection of bones and the tissues that hold them together in the body
* The Muscular System – all of the muscles that cover the bones and move the body
* Skin – part of the Integumentary System that surrounds and protects the body

**Differentiation Considerations:**

* This lesson involves a jigsaw task in which students work in two groups to determine the main ideas of a lengthy text. In a jigsaw, students first work in an Expert Group to read and take notes on their assigned sections of a text. Next, they transition to their second group, the Jigsaw Group, where they relay the information they learned. They then take notes from their peers about the sections of the text they did not read. Because this task involves two groups, consider being strategic with your grouping. It can be helpful to make sure each Expert Group contains a range of learning abilities as well as a student who can be the group leader.
* Considering using the Human Body Challenge Article for particular students as it is written at a higher Lexile level and contains a greater level of detail than the included article.
* Consider extending students’ learning by having them add notes to their work from this lesson as they read the remainder of the books in the Building Blocks of the Human Body series.

**Lesson and Instruction:**

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| **Lesson Components and Time Guidelines** | **Teacher Actions** | **Notes** |
| **Introduction/Hook**  Approximately 8-10 minutes | Have students use scratch paper to complete a “brain dump.” During a brain dump, students are encouraged to write anything they think about or wonder related to a particular subject. The goal of this is to activate students’ prior knowledge.  Provide students 2 minutes to brain dump everything they know about organs and organ systems. Challenge students to write the entire time.  Have students share what they brain dumped with a neighbor before calling on a few volunteers to share out. Consider picking specific students’ responses to address any misconceptions. |  |
| **Direct Instruction and Modeling**  Approximately 10-15 minutes | Transition to the reading portion of this lesson but first explain that we are going to use a coding system to mark the text as we read. Good readers annotate, or mark, the text to help them keep track of the information. Use the provided Mark the Text Guide or your own system of annotating notes throughout this lesson.  Pass out the Human Body Article and use the introduction for a shared reading experience. Model how to mark the text as you read aloud. Focus your model on identifying the main idea and most important details.  After reading the section, review the marks you made. Model and think aloud which information you would include to help summarize the section. Allow students to discuss and share as well. Model how to add this information to your Human Body Systems Note-Taking Guide. |  |
| **Application Activity**  Approximately 25-35 minutes | Split students into groups of 5, called Expert Groups. Each student will be assigned to an Expert Group which will be responsible for reading about and taking notes on 2 body systems.  After students complete their work in their Expert Group, they will transition to their Jigsaw Group. This group should contain one person from each Expert Group so all sections of the reading are represented.  Explain the following Jigsaw Task procedures to students:   1. Read your section independently. Mark the text using the strategy modeled in class today. 2. Review your text markings and identify at least one thing per section to share with your Expert Group. 3. As an Expert Group, share what you marked in the text. Determine 2-3 bullet points that best summarize each section and add them to your note-taking guide. 4. Transition to your Jigsaw Group to share the main ideas and bullet points associated with the sections your Expert Group read. In addition, add notes to your guide about the sections your Jigsaw Group read. 5. Use this time to ask questions to the experts in your Jigsaw Group! You will need to know about each body system for the next portion of this lesson. | **Expert Group Reading Assignments Recommendations:**   1. The Skin and The Circulatory System 2. The Skeleton and The Digestive System 3. The Respiratory System and The Muscular System 4. The Urinary System and The Nervous System 5. The Endocrine System and the Reproductive System |
| **Independent Application and Demonstration of Learning**  Approximately 10-15 minutes | Have students transition to the independent work setting where they will complete the Body Systems Worksheet. Depending on the needs of your learners, consider allowing them to use the note-taking guide they completed during the lesson for support.  This assignment requires students to match organ systems with their descriptions. Students should be aware that some descriptions may match two organ systems. |  |
| **Closure**  Approximately 2-5 minutes | Consider reviewing answers with students to provide immediate feedback. Consider allowing students to keep their notes for use throughout the remainder of related lessons.  Remind students that today they were able to collaborate with two groups to first become an expert on two organs, and second, to share their knowledge with others. In addition, they combined their reading skills with their knowledge of the human body to determine the jobs of the 10 organ systems. |  |

**Next Steps and Reflection:**

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| What went well? |  |
| What changes might be beneficial? |  |
| Reteaching needs |  |
| Extension needs |  |