

Essential Question: How do body systems work together to maintain homeostasis?

LT: I can create a model that shows how 2 body systems work together.

4.1.2b; 4.1.2c

Steps:

1. For the first part of this project you will work with partners to become an expert of a particular body system. Research and study your designated organ system. You may use your textbook, books from the classroom library, and/or the Internet for your research.
Helpful websites to get information:
 - kidshealth.org/kid/ -click on "How the Body Works" link
 - brainpop.com -search "body systems"
 - nationalgeographic.com -search "body systems"
 - biology4kids.com/files/systems_main.html -click on your body system
 - health.howstuffworks.com/human-body/systems -click on your body system

✓ You should work to answer the following guiding questions in your Science Notebook (including citations):

 - What is the name of the organ system?
 - What are the main functions of the organ system?
 - What major organs/structures make up the system?
 - What is the function of each of these major organs/structures?

✓ Be sure to study this system and be prepared to share your information with members of another group.
2. For the second part of this project you will work with experts of a body system other than that of your own. You will work to compare and contrast the organ functions of the two systems you are investigating. You are looking for any function(s) they have in common. (The functions do not have to be identical but must be closely related.)

✓ You should work to create a Venn-diagram in your Science Notebook. Your diagram should include:

 - The name of the compared body systems
 - At least 2 major organs/structures that make up EACH system and their functions.
 - At least 1 function that both systems share and a description of how each system contributes to the function.
3. You will work with your partners from Step 2 to create an informative and interesting presentation that explains how the two body systems work together to accomplish one goal or a set of related goals. Your presentation may take the form of a PowerPoint presentation, a letter, song, skit, cartoon, or infomercial. You are encouraged to be creative! Although the platform by which you and your partners choose to present is for your choice, all presentations will be held to the same standards:

✓ Your report should demonstrate an accurate and thorough understanding of scientific concepts. The description should effectively explain how organ systems work together to accomplish one goal or a set of related goals.

✓ The presentation should last for 4-6 minutes and the information should be presented in an organized and interesting way.
4. You will work with your partners from Steps 2 and 3 to create a 3D visual aid that illustrates at least 2 major organs/structures that make up EACH of the two systems. You can make one outline of the human body on poster paper and add two 3D organs/structures from each of the two systems. You are expected to label and briefly describe the function of each organ. You are encouraged to be creative with the materials you use. Be sure to follow the following guidelines:

✓ At least 2 major organs/structures that make up EACH of the two systems are illustrated in 3D, labeled and briefly described.

✓ Your visual aid should be creative, colorful, easy to read, and used effectively.

Name: _____ Body System: _____

Student Self-Assessment:

Participation					
I often contributed good ideas that were relevant to the topic and task. I came to the meeting prepared. I did my share of the work.	4	3	2	1	I seldom contributed good ideas. Sometimes I was talking off-task. I did not come to meetings prepared. I did not do my share of the work.
Working with Others					
I often compromised and cooperated. I did take initiative when needed and/or listened and respected the ideas of others.	4	3	2	1	I seldom compromised and cooperated. I did not take initiative when needed and/or did not listen and respect the ideas of others.
Product					
My part of the task is complete and accurate. My work was submitted on time.	4	3	2	1	I did not complete my part of the task. The information I presented was inaccurate and/or not done correctly. It was not completed on time.
Understanding Content					
I can speak about the topic and group work knowledgeably. I can sum-up the lesson.	4	3	2	1	I do not understand what I did in my group. I did not ask or answer questions. I cannot sum-up the lesson.

Presentation Rubric:

	4	3	2	1
Content	Report demonstrates an accurate and thorough understanding of scientific concepts. The description effectively explains how organ systems work together to accomplish one goal or a set of related goals.	Report demonstrates an accurate understanding of most scientific concepts. The description is correct but may contain one or two minor errors.	Report demonstrates a limited understanding of scientific concepts. The description contains three or four content errors.	Report demonstrates inaccurate understanding of scientific concepts. The description contains five or more content errors.
Presentation	The presentation lasts for 4-6 minutes and the information is presented in an organized and interesting way.	The presentation lasts for 4-6 minutes and the information is presented in an organized way.	The presentation does not follow the time frame allotted and the information may be only partially organized.	The presentation does not follow the time frame allotted. The information is presented in a disorganized way and had little evidence of preparation.
Visual Aid	At least 2 major organs/structures that make up EACH of the two systems are illustrated in 3D. Organs are labeled and briefly described. Visual aid is creative, colorful, easy to read, and used effectively.	No more than 1 major organ/structure is missing, unlabeled and/or not described. Visual aid is colorful, readable and used somewhat effectively.	No more than 2 major organs/structures are missing, labeled and/or not described. Visual aid is lacking color, difficult to read, and/or not used effectively.	3 or more major organs/structures are missing, labeled and/or not described. Visual aid is lacking color, difficult to read, and/or not used effectively.

Names:

What is the name of the organ system?		What is the name of the organ system?	
What are the main functions of the organ system?		What are the main functions of the organ system?	
Major organ/structure: 1.	Major function of the organ 1.	Major organ/structure: 1.	Major function of the organ 1.
2.	2.	2.	2.
Explain how the 2 organ systems work together to accomplish one goal or a set of related goals:			
At least 2 major organs/structures that make up the system: _____ the 1 st organ/structure is 3D _____ the 1 st organ/structure is accurate in scale _____ the 1 st organ/structure is labeled _____ the 1 st organ/structure is briefly described _____ the 1 st organ/structure is creative, colorful, easy to read _____ the 2 nd organ/structure is 3D _____ the 2 nd organ/structure is accurate in scale _____ the 2 nd organ/structure is labeled _____ the 2 nd organ/structure is briefly described _____ the 2 nd organ/structure is creative, colorful, easy to read		At least 2 major organs/structures that make up the system: _____ the 1 st organ/structure is 3D _____ the 1 st organ/structure is accurate in scale _____ the 1 st organ/structure is labeled _____ the 1 st organ/structure is briefly described _____ the 1 st organ/structure is creative, colorful, easy to read _____ the 2 nd organ/structure is 3D _____ the 2 nd organ/structure is accurate in scale _____ the 2 nd organ/structure is labeled _____ the 2 nd organ/structure is briefly described _____ the 2 nd organ/structure is creative, colorful, easy to read	
Inquiry:		Inquiry:	

Presentation Rubric:

	4	3	2	1
Content	Report demonstrates an accurate and thorough understanding of scientific concepts. The description effectively explains how organ systems work together to accomplish one goal or a set of related goals.	Report demonstrates an accurate understanding of most scientific concepts. The description is correct but may contain one or two minor errors.	Report demonstrates a limited understanding of scientific concepts. The description contains three or four content errors.	Report demonstrates inaccurate understanding of scientific concepts. The description contains five or more content errors.
Presentation	The presentation lasts for 4-6 minutes and the information is presented in an organized and interesting way.	The presentation lasts for 4-6 minutes and the information is presented in an organized way.	The presentation does not follow the time frame allotted and the information may be only partially organized.	The presentation does not follow the time frame allotted. The information is presented in a disorganized way and had little evidence of preparation.
Visual Aid	At least 2 major organs/structures that make up EACH of the two systems are illustrated in 3D. Organs are labeled and briefly described. Visual aid is creative, colorful, easy to read, and used effectively.	No more than 1 major organ/structure is missing, unlabeled and/or not described. Visual aid is colorful, readable and used somewhat effectively.	No more than 2 major organs/structures are missing, labeled and/or not described. Visual aid is lacking color, difficult to read, and/or not used effectively.	3 or more major organs/structures are missing, labeled and/or not described. Visual aid is lacking color, difficult to read, and/or not used effectively.

Teacher and Colleague Feedback:

	Model Strengths	Model Limitations

NAME:				
	Digestive	Respiratory	Circulatory	Excretory
Digestive	1.	2.	3.	4.
Respiratory	5.	6.	7.	8.
Circulatory	8.	10.	11.	12.
Excretory	13.	14.	15.	16.
Nervous	17.	18.	19.	20.
Endocrine	21.	22.	23.	24.
Immune	25.	26.	27.	28.
Reproductive	29.	30.	31.	32.

	Nervous	Endocrine	Immune	Reproductive
Digestive	33.	34.	35.	36.
Respiratory	37.	38.	39.	40.
Circulatory	41.	42.	43.	44.
Excretory	45.	46.	47.	48.
Nervous	49.	50.	51.	52.
Endocrine	53.	54.	55.	56.
Immune	57.	58.	59.	60.
Reproductive	61.	62.	63.	64.

Essential Question: What diseases and conditions affect the human body?

LT: I can create a model that shows a disease or condition that affects a body system.

Steps:

1. For the first part of this project you will work with a partner to become an expert of a particular disease or condition that affects the human body. Research and study your designated disease/condition. You may use your textbook, books from the classroom library, and/or the Internet for your research.

Helpful websites to get information:

- kidshealth.org
- CDC.gov
- WebMD.com
- MedlinePlus.gov
- Mayoclinic.com

- ✓ You should work to answer the following guiding questions in your Science Notebook (including citations):
 - What is the name of the disease/condition?
 - What are the symptoms and what does it do to your body/organs? (This should be detailed and will be the largest part of your presentation.)
 - How is it transmitted or acquired?
 - Who is most likely impacted by this disease or condition?
 - How is the disease/condition diagnosed? Can it be mistaken for another disease/condition?
 - How is it treated and/or prevented? How does your immune system work to protect against this disease/condition? Is there a vaccine that can help prevent it?
 - Is there any other interesting information (origin, famous individuals who have had it, etc.)?
2. You will work with your partner from Step 1 to create an interesting presentation that informs your class on the disease or condition. Your presentation may take the form of a PowerPoint presentation, a letter, song, skit, cartoon, infomercial or **case study**. Although the platform by which you and your partner choose to present is for your choice, all presentations will be held to the same standards:
 - ✓ Your report should demonstrate an accurate and thorough understanding of health concepts. The presentation should strongly answer all of the following:
 - What are the symptoms of the disease/condition and what does it do to your body/organs?
 - How is the disease/condition transmitted or acquired?
 - Who is most likely impacted by this disease or condition?
 - How is the disease/condition diagnosed? Can it be mistaken for another disease/condition?
 - How is the disease/condition treated and or prevented?
 - ✓ The presentation should last for 4-6 minutes and the information should be presented in an organized and interesting way.
3. You will work with your partner from Steps 1 and 2 to create a 3D visual aid that illustrates the disease/condition that you have researched. Your visual should contain the organ(s)/structure(s) that is/are affected by the disease. You will be expected briefly describe your model. You are encouraged to be creative with the materials you use. Be sure to follow the following guidelines:
 - ✓ Your visual aid should be creative, colorful, and easy to read, and should effectively highlight the disease/condition.

Student Self Assessment:

Participation					
I often contributed good ideas that were relevant to the topic and task. I came to the meeting prepared. I did my share of the work.	4	3	2	1	I seldom contributed good ideas. Sometimes I was talking off-task. I did not come to meetings prepared. I did not do my share of the work.
Working with Others					
I often compromised and cooperated. I did take initiative when needed and/or listened and respected the ideas of others.	4	3	2	1	I seldom compromised and cooperated. I did not take initiative when needed and/or did not listen and respect the ideas of others.
Product					
My part of the task is complete and accurate. My work was submitted on time.	4	3	2	1	I did not complete my part of the task. The information I presented was inaccurate and/or not done correctly. It was not completed on time.
Understanding Content					
I can speak about the topic and group work knowledgeably. I can sum-up the lesson.	4	3	2	1	I do not understand what I did in my group. I did not ask or answer questions. I cannot sum-up the lesson.

Presentation Rubric:

	4	3	2	1
Content	Report demonstrates an accurate and thorough understanding of health concepts. The presentation strongly answers all of the following: -What are the symptoms of the disease/condition and what does it do to your body/organs? -How is it transmitted or acquired? -Who is most likely impacted? -How is it treated and/or prevented?	Report demonstrates an accurate understanding of most health concepts. The presentation is missing a strong description of 1 of the following: -What are the symptoms of the disease/condition and what does it do to your body/organs? -How is it transmitted or acquired? -Who is most likely impacted? -How is it treated and/or prevented?	Report demonstrates a limited understanding of health concepts. The presentation is missing a strong description of 2 of the following: -What are the symptoms of the disease/condition and what does it do to your body/organs? -How is it transmitted or acquired? -Who is most likely impacted? -How is it treated and/or prevented?	Report demonstrates inaccurate understanding of health concepts. The presentation is missing a strong description of 3 of the following: -What are the symptoms of the disease/condition and what does it do to your body/organs? -How is it transmitted or acquired? -Who is most likely impacted? -How is it treated and/or prevented?
Presentation	The presentation lasts for 4-5 minutes and the information is presented in an organized and interesting way.	The presentation lasts for 4-5 minutes and the information is presented in an organized way.	The presentation does not follow the time frame allotted and the information may be only partially organized.	The presentation does not follow the time frame allotted. The information is presented in a disorganized way and had little evidence of preparation.
Visual Aid	A 3D visual aid is creative, colorful, and easy to read, and effectively highlights the disease/condition.	Visual aid is colorful, readable and used somewhat effectively.	Visual aid is lacking color, difficult to read, and/or not used effectively.	Visual aid is not used at all in the presentation.

Body Systems and Diseases/Conditions Group Planning

	Expert Group 1	Expert Group 2
Digestive System	- - -	- - -
Respiratory System	- - -	- - -
Circulatory System	- - -	- - -
Excretory System	- - -	- - -
Nervous System	- - -	- - -
Endocrine System	- - -	- - -
Immune System	- - -	- - -
Reproductive System	- - -	- - -

Reproductive System Expert Group 1	Circulatory System Expert Group 1
Endocrine System Expert Group 1	Nervous System Expert Group 1
Immune System Expert Group 1	Respiratory System Expert Group 1
Digestive System Expert Group 1	Excretory System Expert Group 1
Reproductive System Expert Group 2	Endocrine System Expert Group 2
Digestive System Expert Group 2	Respiratory System Expert Group 2
Excretory System Expert Group 2	Nervous System Expert Group 2
Circulatory System Expert Group 2	Immune System Expert Group 2

	Expert Group 1	Expert Group 2
Digestive System	GERD	Celiac Disease
Respiratory System	Lung Cancer	COPD
Circulatory System	Hypertension	High Cholesterol
Excretory System	Kidney Stones	Kidney Disease
Nervous System	Alzheimer's Disease	Headaches and Migraines
Endocrine System	Diabetes	Hypothyroidism
Immune System	HIV/AIDS	Allergies
Reproductive System	Prostate Cancer	Cervical Cancer