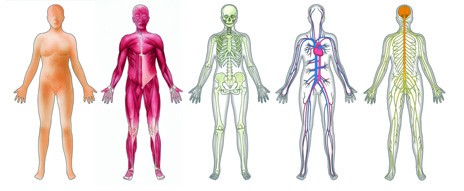
STEM Science Notebook

**Human Body Systems**



|  |
| --- |
| BIG QUESTION: How do the systems of the human body function to maintain our health and keep us alive? |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **The Human Body (PreAssessment)** | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | |
| Is there anything missing from your diagram? | | | | | | | | | | | | | | | | | | | | | |
| **What I Think I Know About the Body Systems** | | | | | | | | | | | | | | | | | | | | | |
| **Body System** | | | | **What’s the Function?**  (Your Prediction) | | | | | | | | **Actual Function**  (What We Learn) | | | | | | | | **Name an Organ that is Part of this System** | |
| respiratory | | | |  | | | | | | | |  | | | | | | | |  | |
| circulatory | | | |  | | | | | | | |  | | | | | | | |  | |
| immune (lymphatic) | | | |  | | | | | | | |  | | | | | | | |  | |
| digestive | | | |  | | | | | | | |  | | | | | | | |  | |
| excretory | | | |  | | | | | | | |  | | | | | | | |  | |
| muscular | | | |  | | | | | | | |  | | | | | | | |  | |
| skeletal | | | |  | | | | | | | |  | | | | | | | |  | |
| nervous | | | |  | | | | | | | |  | | | | | | | |  | |
| endocrine | | | |  | | | | | | | |  | | | | | | | |  | |
| reproductive | | | |  | | | | | | | |  | | | | | | | |  | |
| integumentary | | | |  | | | | | | | |  | | | | | | | |  | |
| **Part 1:**  **What are the**  **causes of**  **illnesses and disease?** | | | | | | | | | | | | | | | | | | | | | |
| **Focus Question: How do you get sick?** | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | |
| Ideas about how we get sick | | | | | | | | | | | | | | | | | | | | | |
| Observations | | | | | | | | | | | | | | | | | | | | | |
| **Explanation**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | | | | | | | | | | | | | | | | | | | | | |
| **Project Board**  How do our body systems work to keep us healthy and how are they affected by illness? | **Why should I care?** | |  | | | | | | |  | | | | | |  | | | | | |
| **What is our evidence?** | |  | | | | | | |  | | | | | |  | | | | | |
| **What have we learned?** | |  | | | | | | |  | | | | | |  | | | | | |
| **What do we need to investigate?** | |  | | | | | | |  | | | | | |  | | | | | |
| **What do we think we know?** | |  | | | | | | |  | | | | | |  | | | | | |
| **Why should I care?** |  | | | | | |  | | | | | | |  | | | | |  | | |
| **What is our evidence?** |  | | | | | |  | | | | | | |  | | | | |  | | |
| **What have we learned?** |  | | | | | |  | | | | | | |  | | | | |  | | |
| **What do we need to investigate?** |  | | | | | |  | | | | | | |  | | | | |  | | |
| **What do we think we know?** |  | | | | | |  | | | | | | |  | | | | |  | | |
| Cup Simulation Observations | | | | | | | | | | | | | | | | | | | | | |
| **Explanation**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | | | | | | | | | | | | | | | | | | | | | |
| Make a Claim | | | | | | | | | | | | | | | | | | | | | |
| **Focus Question: What are germs?** | | | | | | | | | | | | | | | | | | | | | |
| Germ Video Analysis | | | | | | | | | | | | | | | | | | | | | |
| Sketch  Provide an Explanation for your Sketch | | | | | | | | | | | | | | | | | | | | | |
| **How is it treated? Is there a vaccine?** | |  | | | |  | |  | | | | |  | |  | | |  | | |  |
| **What are the symptoms?** | |  | | | |  | |  | | | | |  | |  | | |  | | |  |
| **Which body system does it affect?** | |  | | | |  | |  | | | | |  | |  | | |  | | |  |
| **How does it spread?** | |  | | | |  | |  | | | | |  | |  | | |  | | |  |
| **Cause (bacterial or viral)** | |  | | | |  | |  | | | | |  | |  | | |  | | |  |
| **Name of disease** | |  | | | |  | |  | | | | |  | |  | | |  | | |  |
| [http://www.derivativepricing.com/Portals/57020/images/Fotolia_19944166_XS.jpg](http://www.google.com/url?sa=i&rct=j&q=swap&source=images&cd=&cad=rja&docid=OJhLJ4prgzt77M&tbnid=1HNBxnz5cLqY9M:&ved=0CAUQjRw&url=http://www.derivativepricing.com/blog/bid/78048/Interest-Rate-Swap-Tutorial-Part-1-of-5-terminology&ei=564wUqLkAZLd4AOyxoDoCg&bvm=bv.52109249,d.dmg&psig=AFQjCNGxItKVcL3yUwb8uaeE8rMwptvz9Q&ust=1379008602678220)FACT SWAP [http://www.derivativepricing.com/Portals/57020/images/Fotolia_19944166_XS.jpg](http://www.google.com/url?sa=i&rct=j&q=swap&source=images&cd=&cad=rja&docid=OJhLJ4prgzt77M&tbnid=1HNBxnz5cLqY9M:&ved=0CAUQjRw&url=http://www.derivativepricing.com/blog/bid/78048/Interest-Rate-Swap-Tutorial-Part-1-of-5-terminology&ei=564wUqLkAZLd4AOyxoDoCg&bvm=bv.52109249,d.dmg&psig=AFQjCNGxItKVcL3yUwb8uaeE8rMwptvz9Q&ust=1379008602678220) *“Bacteria: Good or Bad Guys?”*  My Facts   |  |  |  | | --- | --- | --- | |  |  |  |   Facts from my Classmates   |  |  |  | | --- | --- | --- | |  |  |  | |  |  |  |   Are all bacteria bad for us? Why or why not? | | | | | | | | | | | | | | | | | | | | | |
| **Investigate: Where are bacteria found?** | | | | | | | | | | | | | | | | | | | | | |
| Predictions: | | | | | | | | | | | What can we test? | | | | | | | | | | |
| Plan: (Identify the variables and controls in your experiment.) | | | | | | | | | | | | | | | | | | | | | |
| Data:  Conclusion: | | | | | | | | | | | | | | | | | | | | | |
| **Explanation**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | | | | | | | | | | | | | | | | | | | | | |
| **Investigate: What are viruses?** | | | | | | | | | | | | | | | | | | | | | |
| http://leavingbio.net/VIRUSES%20WEBPAGE_files/image011.gif http://www.bbc.co.uk/staticarchive/2effc5b6f748963d346ae11763b12f9ef34ba8af.jpg | | | | | | | | | | | | | | | | | | | | | |
| What do you notice about the above images? | | | | | | | | | | | | | | | | | | | | | |
| Are viruses alive? (model of how they replicate)  http://autocww.colorado.edu/~toldy2/E64ContentFiles/VirusesMoneransAndProtists/ViralReplication.gif | | | | | | | | | | | | | | | | | | | | | |
| **T-Chart Compare and Contrast**   |  |  | | --- | --- | | Similarities |  |   WORD 2:  WORD 1:   |  | | --- | | Differences | | | | | | | | | | | | | | | | | | | | | | |
| **Explanation**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | | | | | | | | | | | | | | | | | | | | | |
| **Jigsaw Activity – Disease Study and Fill in Chart** | | | | | | | | | | | | | | | | | | | | | |
| **Make a Claim** (What causes us to get sick?) | | | | | | | | | | | | | | | | | | | | | |
| **Part 2:**  **How does your body function when sick and when in a healthy state?** | | | | | | | | | | | | | | | | | | | | | |
| **Focus Question: What happens to your body when you get sick?** | | | | | | | | | | | | | | | | | | | | | |
| What Do You See?  http://t1.gstatic.com/images?q=tbn:ANd9GcT5NtqAy94GszB39dB_KDCWodUvQcYPi1Cf-8thZ-HE-mlxyDSmcA | | | | | | | | | | | | | | | | | | | | | |
| What Do You Think? (Word Sort) | | | | | | | | | | | | | | | | | | | | | |
| System | | | | | | | | | | | NOT a System | | | | | | | | | | |
| What Do You Think Now? | | | | | | | | | | | | | | | | | | | | | |
| **How is Your Body a System?** | | | | | | | | | | | | | | | | | | | | | |
| **Cells and Tissues** | | | | | | | | | | | | | | | | | | | | | |
|  | | | | |  | | | | | |  | | | | | |  | | | | |
| **Organs** | | | | | | | | | | | | | | | | | | | | | |
|  | | | | |  | | | | | |  | | | | | |  | | | | |
| **Systems** | | | | | | | | | | | | | | | | | | | | | |
|  | | | | |  | | | | | |  | | | | | |  | | | | |
| **What does it mean for our respiratory system to function properly?** | | | | | | | | | | | | | | | | | | | | | |
| **Explore Breathing Rate** (Feel your breathing)   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Trials | Number of resting breaths in 6 sec. | Number of resting breaths in 1 minute | Number of breaths in 6 sec. after exercise | Number of breaths in 1 minute after exercise | | 1 |  |  |  |  | | 2 |  |  |  |  | | 3 |  |  |  |  | | Average # of breaths per minute |  | | | | |  |  |  |  |   How did exercising impact your results?  Why do you think there is a difference between your resting breathing rate and your breathing rate after exercise? | | | | | | | | | | | | | | | | | | | | | |
| **Model** | | | | | | | | | | | | | | | | | | | | | |
| **Diagram**  http://johncoffeesisnperkins.weebly.com/uploads/1/4/1/9/14195583/1357406347.jpg   |  |  | | --- | --- | | **Strengths of Model** | **Weaknesses of Model** | |  |  | |  |  | |  |  | | | | | | | | | | | | | | | | | | | | | | |
| **Function** | | | | | | | | | | | | | | | | | | | | | |
| How do we know this system is functioning properly? | | | | | | | | | | | | | | | | | | | | | |
| Provide an example of how illness affects the function of this system. | | | | | | | | | | | | | | | | | | | | | |
| **What does it mean for our circulatory system to function properly?** | | | | | | | | | | | | | | | | | | | | | |
| **Explore Heart Rate** (Feel your pulse)   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Trials | Number of resting heart beats in 6 sec. | Number of resting heart beats in 1 minute | Number of heart beats in 6 sec. after exercise | Number of heart beats in 1 minute after exercise | | 1 |  |  |  |  | | 2 |  |  |  |  | | 3 |  |  |  |  | | Average # of breaths per minute |  | | | | |  |  |  |  |   How did exercising impact your results?  Why do you think there is a difference between your resting heart rate and your heart rate after exercise? | | | | | | | | | | | | | | | | | | | | | |
| **Model 1** | | | | | | | | | | | | | | | | | | | | | |
| **Diagram**  http://medicalanatomy.net/wp-content/uploads/diagram-of-the-circulatory-system-for-kids-158.jpg   |  |  | | --- | --- | | **Strengths of Model 1** | **Weaknesses of Model 1** | |  |  | |  |  | |  |  | | | | | | | | | | | | | | | | | | | | | | |
| **Model 2** | | | | | | | | | | | | | | | | | | | | | |
| **Diagram**  http://heartzine.com/diagrams/circulatory-system.jpg http://avstrongforlife.files.wordpress.com/2013/08/circulatory_system.gif   |  |  | | --- | --- | | **Strengths of Model 2** | **Weaknesses of Model 2** | |  |  | |  |  | |  |  | | | | | | | | | | | | | | | | | | | | | | |
| **Function** | | | | | | | | | | | | | | | | | | | | | |
| How do we know this system is functioning properly? | | | | | | | | | | | | | | | | | | | | | |
| Provide an example of how illness affects the function of this system. | | | | | | | | | | | | | | | | | | | | | |
| **What is the immune (lymphatic) system?** | | | | | | | | | | | | | | | | | | | | | |
| **Reading: *“The Other Circulatory System”***   |  |  | | --- | --- | | [https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcSsCtmqsX9a_I5SyzTwDtwqU3BEXdVV5xaJORXlSS5dYJQ82xMl9A](http://www.google.com/imgres?biw=1366&bih=599&tbm=isch&tbnid=OzcYeR6Iyy736M:&imgrefurl=http://getbetterhealth.com/managing-patient-uncertainty/2011.03.09/blue-question-mark&docid=Wk5Wxrq9Sdz-6M&imgurl=http://getbetterhealth.com/wp-content/uploads/2011/03/Blue-question-mark.jpg&w=226&h=246&ei=s0E8UtHfF7S54APGhIHIAQ&zoom=1&ved=1t:3588,r:58,s:0,i:271&iact=rc&page=3&tbnh=181&tbnw=166&start=37&ndsp=23&tx=112&ty=68)**Information that I don’t understand:** | [https://encrypted-tbn3.gstatic.com/images?q=tbn:ANd9GcTSR_DTuH2TRN69Y4uofid1QSAXScsA7GCHnhBO5Qp4hddMe2XH](http://www.google.com/imgres?start=85&biw=1366&bih=599&tbm=isch&tbnid=F5_3Qp_iE9ht5M:&imgrefurl=http://www.polyvore.com/exclamation_point_definition_at_yourdictionary.com/thing?id%3D37860758&docid=bPyqjZTOQCoTlM&imgurl=http://www.polyvore.com/cgi/img-thing?.out%3Djpg%26size%3Dl%26tid%3D37860758&w=300&h=300&ei=ekE8UsKoMrDB4AOE_IGQBQ&zoom=1&ved=1t:3588,r:11,s:100,i:37&iact=rc&page=5&tbnh=182&tbnw=177&ndsp=28&tx=90&ty=67)**Things that seem surprising or interesting:** | | http://michaelhindes.com/wp-content/uploads/2012/09/the-power-of-words.png**Vocabulary that I want to know:** | [https://encrypted-tbn3.gstatic.com/images?q=tbn:ANd9GcT_ZbVdJYr0xy7YUwbYR_c2FfYYfVXNV-x1bApBfp_wQG7l2sywQQ](http://www.google.com/imgres?sa=X&biw=1366&bih=599&tbm=isch&tbnid=vMZ33kFAIWuqMM:&imgrefurl=http://www.theinklingsoflife.com/2010/10/inventions-that-shaped-mankind.html&docid=OZ1NKCJu7PO7KM&imgurl=http://3.bp.blogspot.com/_X46XTQfCVTw/TMHTeedr3sI/AAAAAAAAAJU/18xWIPAohxY/s1600/lightbulb.gif&w=490&h=512&ei=CkE8Uve0IvXF4APpr4DAAQ&zoom=1&ved=1t:3588,r:44,s:0,i:230&iact=rc&page=3&tbnh=170&tbnw=163&start=38&ndsp=30&tx=117&ty=89)**Things that remind me of other things I know:** | | | | | | | | | | | | | | | | | | | | | | |
| **Diagram**  http://s3.amazonaws.com/Edcanvas/4507/local/lymphatic-system-immune-system.jpg | | | | | | | | | | | | | | | | | | | | | |
| **Function** | | | | | | | | | | | | | | | | | | | | | |
| How do we know this system is functioning properly? | | | | | | | | | | | | | | | | | | | | | |
| Provide an example of how illness affects the function of this system. | | | | | | | | | | | | | | | | | | | | | |
| **What does it mean for our digestive system to function properly?** | | | | | | | | | | | | | | | | | | | | | |
| **Model 1** | | | | | | | | | | | | | | | | | | | | | |
| **Diagram**  http://www.ducksters.com/science/digestive_system.jpg   |  |  | | --- | --- | | **Strengths of Model 1** | **Weaknesses of Model 1** | |  |  | |  |  | |  |  | | | | | | | | | | | | | | | | | | | | | | |
| **Model 2**   |  |  | | --- | --- | | **Strengths of Model 2** | **Weaknesses of Model 2** | |  |  | |  |  | |  |  | | | | | | | | | | | | | | | | | | | | | | |
| **Reading: *Diffusion and Active Transport: Getting from Here to There***   |  | | --- | | Main Idea | | Three Important Details   1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | Summary of the Passage in ONE Sentence | | | | | | | | | | | | | | | | | | | | | | |
| **Model 3** | | | | | | | | | | | | | | | | | | | | | |
| **Function** | | | | | | | | | | | | | | | | | | | | | |
| How do we know this system is functioning properly? | | | | | | | | | | | | | | | | | | | | | |
| Provide an example of how illness affects the function of this system. | | | | | | | | | | | | | | | | | | | | | |
| **What are the parts of the excretory system?** | | | | | | | | | | | | | | | | | | | | | |
| **Diagram**  http://images.tutorvista.com/content/feed/u72/body8.JPG | | | | | | | | | | | | | | | | | | | | | |
| **Function** | | | | | | | | | | | | | | | | | | | | | |
| How do we know this system is functioning properly? | | | | | | | | | | | | | | | | | | | | | |
| Provide an example of how illness affects the function of this system. | | | | | | | | | | | | | | | | | | | | | |
| **How are the nervous system and the endocrine system related?** | | | | | | | | | | | | | | | | | | | | | |
| **Diagrams**  http://nervespictures.com/large/10/Nervous-System-Pictures-3.jpg  http://images.flatworldknowledge.com/stangor_2_1/stangor_2_1-fig03_023.jpg | | | | | | | | | | | | | | | | | | | | | |
| Observations | | | | | | | | | | | | | | | | | | | | | |
| **Function** | | | | | | | | | **Function** | | | | | | | | | | | | |
| How do we know this system is functioning properly? | | | | | | | | | | | | | | | | | | | | | |
| Provide an example of how illness affects the function of this system. | | | | | | | | | | | | | | | | | | | | | |
| **How does the musculoskeletal system work?** | | | | | | | | | | | | | | | | | | | | | |
| **Explore Muscle Movement** | | | | | | | | | | | | | | | | | | | | | |
| **Model** | | | | | | | | | | | | | | | | | | | | | |
| **Observations** | | | | | | | | | | | | | | | | | | | | | |
| **Diagrams**  http://www.buzzle.com/images/diagrams/skeleton/labeled-skeleton-diagram.jpg  http://shawscience7hbs3.wikispaces.com/file/view/Muscular_System.jpg/196268070/324x400/Muscular_System.jpg   |  |  | | --- | --- | | **Strengths of Model** | **Weaknesses of Model** | |  |  | |  |  | |  |  | | | | | | | | | | | | | | | | | | | | | | |
| **Do all joints work in the same way?**  http://cnx.org/content/m44786/latest/Figure_38_03_04.jpg | | | | | | | | | | | | | | | | | | | | | |
| **Function** | | | | | | | | | | | | | | | | | | | | | |
| How do we know this system is functioning properly? | | | | | | | | | | | | | | | | | | | | | |
| Provide an example of how illness affects the function of this system. | | | | | | | | | | | | | | | | | | | | | |
| **What is the reproductive system?** | | | | | | | | | | | | | | | | | | | | | |
| **Diagram**  http://media.web.britannica.com/eb-media/31/94931-004-4DED6AD1.jpg | | | | | | | | | | | | | | | | | | | | | |
| **Function** | | | | | | | | | | | | | | | | | | | | | |
| How do we know this system is functioning properly? | | | | | | | | | | | | | | | | | | | | | |
| Provide an example of how illness affects the function of this system. | | | | | | | | | | | | | | | | | | | | | |
| **What is the integumentary system?** | | | | | | | | | | | | | | | | | | | | | |
| **Diagram**  http://zje1.files.wordpress.com/2013/04/blog1.jpg | | | | | | | | | | | | | | | | | | | | | |
| **Function** | | | | | | | | | | | | | | | | | | | | | |
| How do we know this system is functioning properly? | | | | | | | | | | | | | | | | | | | | | |
| Provide an example of how illness affects the function of this system. | | | | | | | | | | | | | | | | | | | | | |
| **The Body in Balance** | | | | | | | | | | | | | | | | | | | | | |
| What are some processes the body does automatically? | | | | | | | | | | | | | | | | | | | | | |
| **Model**  How difficult is it for you to maintain your body temperature? | | | | | | | | | | | | | | | | | | | | | |
| **Explanation**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | | | | | | | | | | | | | | | | | | | | | |
| **The Human Body (Post Assessment)** | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | |

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| **Word Bank** | |
| **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |
| **Content**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | |
| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | **Question** | | | | How do the systems of the human body function to maintain our health and keep us alive? | | | | | **Claim** | | | |  | | | | | **Evidence**  **Evidence** | |  | | | |  | | |  | | | |  | | | **Analysis** | |  | | | | | | |  | | **Claim**  *A statement or conclusion that answers the original question/problem.* | | **Evidence**  *Sufficient and appropriate scientific data/information and/or personal information or experiences that supports the claim.* | | **Analysis**  *A justification that connects the evidence to the claim by using appropriate and sufficient scientific principles and vocabulary.* | | | 0 | | **Does not make a claim, or makes an inaccurate claim.** | | **Does not provide evidence, or only provides inaccurate evidence or vague evidence (i.e. the data shows me it is true)** | | **Does not provide an analysis, or only provides an irrelevant analysis.** | | | 1 | | **Makes an accurate claim but vague or incomplete claim.** | | **Makes a general statement and does not include specific data.** | | **Repeats evidence and links it to the claim, but does not include scientific principles and/or vocabulary** | | | 2 | | **Makes an accurate and complete claim.** | | **Provides 1 piece of evidence to support their claim** | | **Connects evidence to the claim using scientific principles or vocabulary but not both.** | | | 3 | | **Claim is exceptionally well done and able to be understood minus the question** | | **Provides 2 or more pieces of evidence to support their claim** | | **Connects evidence to the claim using scientific principles and vocabulary.** | | | |

**7th/8th Grade STEM Notebook Rating Scale**

*CCSS.ELA-LITERACY.W.7.1 and CCSS.ELA-LITERACY.W.8.1*

*“Write arguments to support claims with clear reasons and relevant evidence.”*

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| **Rating** | **Description** |
| 4 | I can write arguments supported with clear, logical reasons and relevant evidence that creates cohesion and clarifies relationships among claims, reasons, and evidence. |
| 3 | I can write arguments to support claims with clear reasons and relevant evidence. |
| 2 | I can write arguments that partially support claims with reasons and evidence. |
| 1 | I can introduce a claim(s) but am unable to support them with reasons and evidence. |

**Student self-reflection:**

Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

My personal rating is a \_\_\_\_\_\_\_ because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

My goal for improvement is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Teacher Comments:**