

7th Grade Science

Organization of Living Things Unit Information

Milestones Domain/Weight: Cells & Genetics (includes the Human Body) 35%

Purpose/Goal(s): Within the Cells and Genetics domain, students are expected to recognize cells as the basic building blocks of organisms and to understand their structure and function. Students should explain that tissues, organs, and organ systems serve the needs cells have for oxygen, food, and waste removal.

Content Map: [Organization of Living Things Content Map](#)

Content from Frameworks: [Organization of Living Things Content from Frameworks](#)

Prerequisites: [Organization of Living Things Elementary Standards](#)

Unit Length: Approximately 40 days

[Cell Parts Study Guide](#) | [Cell Parts Study Guide KEY](#)

[Cell Processes Study Guide](#) | [Cell Processes Study Guide KEY](#)

[Human Body Study Guide](#) | [Human Body Study Guide KEY](#)

Introduction to Life Science and Unit 1: Characteristics of Living Things – Use the resources below as an introduction to the unit and to Life Science. The lesson should start with the ppt, which includes an activator. Once the basic characteristics of living things are covered, select one or two of the activities to apply the concepts. Do not spend more than a class period and a half covering living vs. non-living. Move to essential question 1 once the concept has been covered.

- [Characteristics of Living Things PPT](#)
- [Living Nonliving Sorting Cards](#)
- [Is Sammy Alive?](#)
- [Mystery Find](#)
- [Cute But Confusing](#)

Click on the links below for resources by Essential Question:

[EQ 1: How do cells, tissues, organs, and organ systems explain the complexity of living organisms?](#)

[EQ 2: What is the relationship between the structure and function of cell organelles?](#)

[EQ 3: What processes are necessary for the survival of a cell, tissue, organ, and organ system?](#)

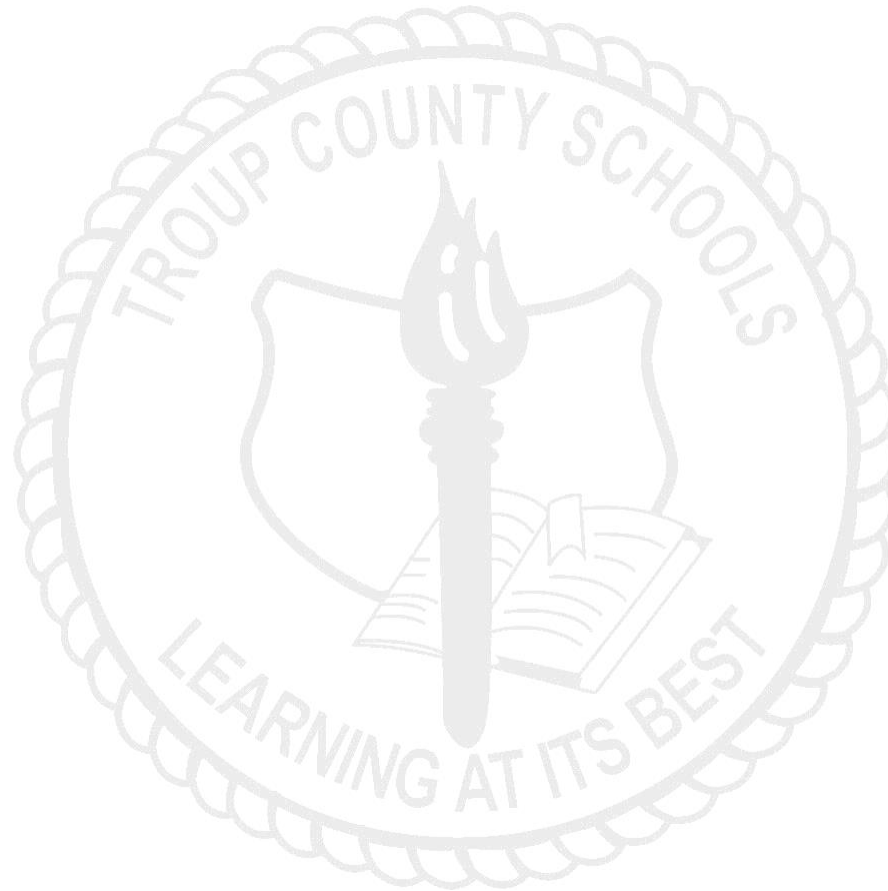
[EQ 4: How do major organ systems work together in living organisms?](#)

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Standard(s) and Essential Question	Vocabulary	Resources [Back to Top]	Assessment
<p><u>Standard(s):</u> S7L2c. Explain that cells are organized into tissues, tissues into organs, organs into systems, and systems into organisms</p> <p><u>Essential Question:</u> 1. How do cells, tissues, organs, and organ systems explain the complexity of living organisms?</p>	<p><u>Essential*</u> Cell Organ Tissue Organism Organ system</p> <p><u>Supplemental**</u> Interdependent Cellular organization</p> <p>*Essential Vocabulary listed in the GPS Standards</p> <p>**Supplemental Vocabulary listed in the state frameworks and/or other state document</p>	<p>The resources below are set up in a model lesson format. The first resource is a ppt which provides guidance for the entire lesson including activating, teaching and summarizing strategies. The activities listed below the ppt are used during the lesson and are identified for use where they are most likely appropriate in the ppt. The resources can be used as an entire lesson or pulled out for use separately.</p> <ul style="list-style-type: none"> ▪ Levels of Organization PPT [Includes “I Do”, “We Do”, and “You Do”] - See “Notes” on ppt slides for suggested instructional approaches where applicable or view the Levels of Organization ppt Notes ▪ Levels of Organization Notes Organizer [“You Do”] – students cut out “tabs” and staple them together to form a sort of flipbook to use to record important information during the lesson. ▪ Levels of Organization examples: McDougal Littell textbook page 30 ▪ Possible Activities for Levels of Organization [select one or two if needed]: <ul style="list-style-type: none"> ○ Levels of Organization Interactive Flipchart [“We Do”] – students sort images into cell, tissue, organ, and organ system ○ Levels of Organization Examples [“I Do”] – not an activity but may be needed for additional examples as review ○ Levels of Organization Review [“You Do” or “We Do”] – students (or the teacher) cut out numbered images and the student or small groups must identify or categorize the images as a cell, tissue, organ, organ system, or organism ○ Levels of Organization Sort [“You Do” or “We Do”] – students can cut out the images and put the images in order per teacher directions [smallest to largest level; largest to smallest level; identify the organs; identify the cells; etc.]. See the resource for additional details. ○ Possible Labs [“You Do” or “We Do”] <ul style="list-style-type: none"> ▪ Onion and Cheek Cell Lab [you may want to use this in EQ 2 after teaching cell organelles] ▪ Use a Microscope to view various cells [microscopes and slides should be in your building] ▪ Levels of Organization Kahoot 	<ul style="list-style-type: none"> ▪ S7L2c. Sample Assessment Items

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Standard(s) and Essential Question	Vocabulary	Resources [Back to Top]	Assessment
		<ul style="list-style-type: none">▪ McDougal Littell Textbook pages: 28-31, 316-317, 585-588▪ Videos<ul style="list-style-type: none">○ Introduction to Cells [2:54] linked in ppt	



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<p><u>Standard(s):</u> S7L2b. Relate cell structures (cell membrane, nucleus, cytoplasm, chloroplasts, mitochondria) to basic cell functions.</p> <p><u>Essential Question:</u> 2. What is the relationship between the structure and function of cell organelles?</p>	<p><u>Essential*</u> Nucleus Cytoplasm Chloroplasts Mitochondria Chromosomes Cell membrane</p> <p><u>Supplemental**</u> Cell wall Organelle Nutrient Prokaryote Eukaryote Chlorophyll Nucleic acid Light energy Protein Lipid Oxygen Carbon Hydrogen Nitrogen Carbohydrate Specialization Energy conversion Cellular energy Vacuole Semi-permeable Waste removal</p> <p>*Essential Vocabulary listed in the GPS Standards</p> <p>**Supplemental Vocabulary listed in</p>	<p>The resources below are set up in a model lesson format. The first resource is a ppt which provides guidance for the entire lesson including activating, teaching and summarizing strategies. The activities listed below the ppt are used during the lesson and are identified for use where they are most likely appropriate in the ppt. The resources can be used as an entire lesson or pulled out for use separately.</p> <ul style="list-style-type: none"> ▪ Cell Structure and Function PPT [Includes “I Do”, “We Do”, and “You Do”] - See “Notes” on ppt slides for suggested instructional approaches where applicable or view the Cell Structure and Function ppt Notes ▪ Cell Facts Review True/False [“You Do” or “We Do”] - review of previous facts about cells ▪ Prokaryote/Eukaryote Comparison [“You Do” or “We Do”] – students can work individually or with a partner to compare a prokaryotic cell to a eukaryotic cell ▪ Prokaryote/Eukaryote Gallery Walk [“We Do”] – Groups identify whether images illustrate a prokaryote or a eukaryote ▪ Plant and Animal Cell Diagrams [“You Do”] – students will label the cell diagrams during the lesson ▪ Activities for Reviewing the Identification of Cell Organelles [Note: all activities are not necessarily needed during the lesson. You may want to use some activities for review throughout the year or if students are still struggling with the organelles]: <ul style="list-style-type: none"> ○ Cell Organelle Match [“You Do” or “We Do”] – students match an image of a cell organelle (based on the labeled cell from the lesson) to its name ○ Cell Parts Kahoot [“You Do” or “We Do”] – students play a game reviewing the cell parts ○ Cell Diagram Variation Worksheet [“You Do” or “We Do”] – students identify cell organelles using a variety of cell diagrams ○ Give students an unlabeled cell diagram and have them work in pairs to quiz each other [“You Do” or “We Do”] ○ Cell Organelle Slipcover [“You Do” or “We Do”]– Put unlabeled cell diagrams in clear slipcovers. Give each student a slipcover, vis-à-vis or expo marker, and paper towel (a sock is also good and cheaper). Call out cell organelles and have students circle the organelle and hold up their slipcover when instructed. ○ Alien Cell Writing Assignment [“You Do”] – students write a short story in which they describe themselves (a plant or animal 	<ul style="list-style-type: none"> ▪ S7L2b. Cell Organelle Sample Assessment Items

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Standard(s) and Essential Question	Vocabulary	Resources [Back to Top]	Assessment
	<p>the state frameworks and/or other state document</p>	<p>cell) to the alien cell</p> <ul style="list-style-type: none"> ▪ Cell Organelle Function Chart ["You Do"] – students will use the chart to identify cell organelle functions during the lesson ▪ Cell Organelle Function Analogies [both are indicated for use in the ppt at specific locations during the lesson] <ul style="list-style-type: none"> ○ Cell Analogies Worksheet ["You Do" or "We Do"] – students compare the function of cell organelles to a factory and a city ○ Cell Organelle Analogy: City Matching Cards ["You Do" or "We Do"] – [optional] students work individually or in pairs to match cell organelle cards with the correct city card based on the function of the cell organelle and the function of the particular city area or division. ▪ Activities for Reviewing Cell Organelles and Function [select activities as needed for review or remediation] <ul style="list-style-type: none"> ○ Cell Organelle and Function ActivInspire Interactive Flipchart ["We Do"] – students use the interactive board to review cell organelles and their function ○ Cell Organelle Tic-Tac-Toe ["We Do"] – review game in which students review organelles and functions ○ Cell Organelle STUDY [BINGO] ["You Do"] – review game in which students review organelles and functions ○ QR Codes Cell Organelle Review ["You Do" or "We Do"] – students read a description to guess a cell organelle and can then scan a QR Code to see if they are correct ○ Cell Organelle "Cellfie" ["You Do"] – students select an organelle and draw an organelle "cellfie" that represents the function of the cell organelle. ○ Cell Organelle Facebook Page ["You Do"] – Have students create a Facebook page for a cell organelle. Students must include a picture and posts from other cell organelle "friends" that relate to the organelle functions. Sample Facebook Template Facebook Note Taking Sheet [these would need to be modified to match cell organelle information] Fakebook [www.classtools.net] ○ Cell Ball ["We Do"] – Write the name of cell organelles on a beach ball. Take turns tossing the ball from student to student [maybe form several small groups]. When a student catches the ball, they must read the word closest to their right pointer 	

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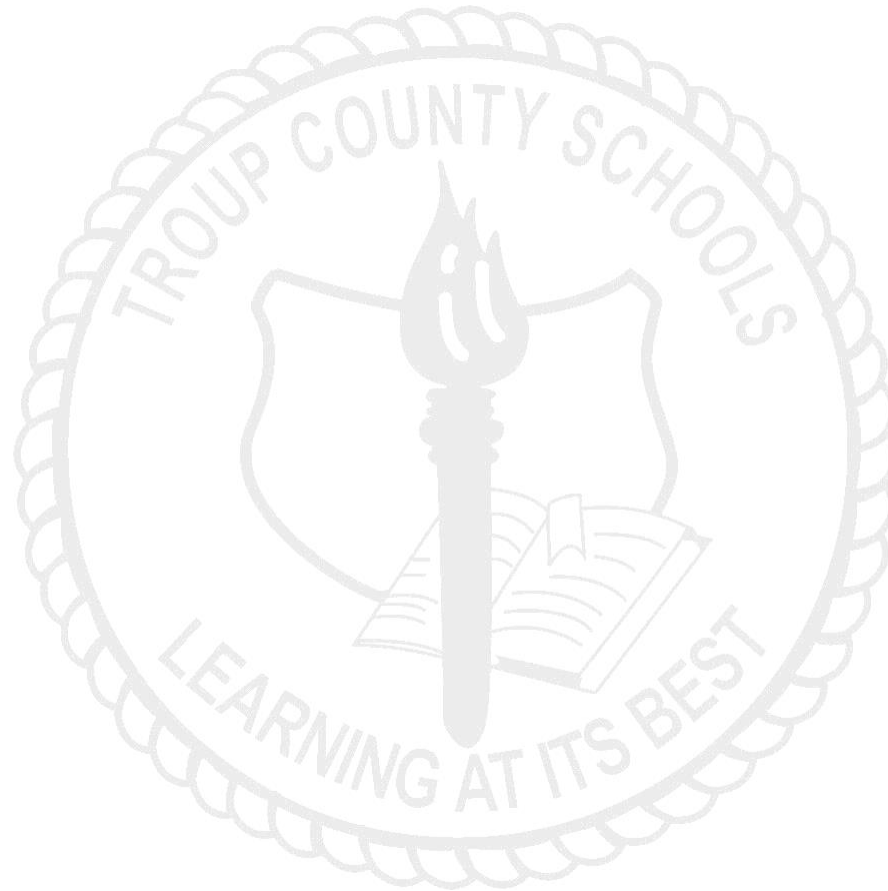
Standard(s) and Essential Question	Vocabulary	Resources [Back to Top]	Assessment
		<p>finger. Then, have the student give the function of that organelle and its importance.</p> <ul style="list-style-type: none"> ○ Plant Cell Play ["We Do"] – short play that can be done by the teacher or two students to reinforce cells ▪ Possible Labs [if not used for EQ 1] ["You Do" or "We Do"] <ul style="list-style-type: none"> ○ Onion and Cheek Cell Lab ○ Use a Microscope to view various cells [microscopes and slides should be in your building] ▪ Cell Organelle Songs <ul style="list-style-type: none"> ○ The Cell Song [linked in ppt] From 60 seconds to about 1:50 seconds organelles are covered that students are not required to know. Make sure they know these are important organelles, but we are not focusing on those in 7th grade. ○ Cells, Cells Parts of the Cell Rap [linked in ppt] ○ http://youtu.be/BTicXXxzQA4 [linked in ppt] To Bruno Mars "The Way You Are" It does include more organelles than we teach ○ Cell Song to the tune of "The Lion Sleeps Tonight" [linked in ppt] ▪ Cell Organelle Summarizer ["You Do"] ▪ Tiered Cell Organelle Activity ["You Do"] – the teacher uses the Cell Organelle Summarizer to differentiate using the tiered cell organelle activity ▪ Cell Organelle Summarizer 2 ["You Do"] – used after the tiered cell organelle activity to determine student levels of mastery and if remediation still needs to occur ▪ McDougal Littell Textbook Pages: 5, 20-24, 33, 41-45 (accelerated content), 47-52, 58-61, 64-65, 74-75, 81-85 (accelerated content), 289 ▪ Animations <ul style="list-style-type: none"> ○ http://learn.genetics.utah.edu/content/cells/scale/ [linked in ppt] ○ http://www.cellsalive.com/howbig.htm [linked in ppt] ○ http://learn.genetics.utah.edu/content/cells/insideacell/ [linked in ppt] ○ http://www.harcourtschool.com/activity/cell/cell.html [electronic labeling with a variety of cells; good for individual review or supplemental computer lab time] ▪ Videos <ul style="list-style-type: none"> ○ Brain Pop: Cell Structures Video [linked in ppt] – goes over the 	

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		<p>function of additional cell organelles, but helps to demonstrate how a cell is like a factory</p> <ul style="list-style-type: none"> ▪ Possible Performance Tasks <ul style="list-style-type: none"> ○ Students can create videos, animations, powerpoints, posters, etc. to make analogies of cell organelles and functions. Below are sample analogies: <ul style="list-style-type: none"> ▪ https://www.youtube.com/watch?v=Xo9L2FB7aDo ▪ https://www.youtube.com/watch?v=5L9-HU-2j0A [only show the first 3 minutes or so as an example] ▪ https://www.youtube.com/watch?v=OkUkw--PUKQ ▪ https://www.youtube.com/watch?v=gT-yNKL5_E0 ▪ https://www.youtube.com/watch?v=B4gl2A5Jyyc ▪ http://www.slideshare.net/e050265/cell-analogy ▪ Cell Analogy Sample Cell Analogy Sample 2 ▪ This sample might be good to show because some of the information does not appear to be accurate. The idea is good, but the information still has to be correct https://www.youtube.com/watch?v=z0D4k4HsZXo ○ The teacher should set up the scenario for students such as, “You are a lawyer in the city of Humanus. An epidemic of cell death has occurred. The police have rounded up and questioned numerous suspects in order to determine the cause of death. These suspects will appear before Judge Justice to defend themselves against the charge of murder.” Each student or group of students should be assigned an organelle and defend why their organelle was not the cause of the cell’s death. They must understand the role of their organelle in the function of the cell, as well as the responsibilities of other organelles. They will present their defense in the form of a classroom trial. ▪ Other <ul style="list-style-type: none"> ○ Jello Animal Cell Model Cell Organelles will have to be modified. This activity may have been done with students in elementary school; therefore, you may need to use it as an anchor activity. ○ Possible Homework or Anchor [Sponge] Activity – Have students brainstorm different songs or song lyrics to represent each cell organelle. For example: For mitochondria, one might 	

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		choose lyrics from the song "I've Got the Power"	



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<p><u>Standard(s):</u> S7L2a. Explain that cells take in nutrients in order to grow and divide and to make needed materials.</p> <p>S7L2d. Explain that tissues, organs, and organ systems serve the needs cells have for oxygen, food, and waste removal.</p> <p><u>Essential Question:</u> 3. What processes are necessary for the survival of a cell, tissue, organ, and organ system?</p>	<p><u>Essential*</u> Food (Sugar, glucose) Oxygen Wastes (removal)</p> <p><u>Supplemental**</u> Osmosis Diffusion Endocytosis Exocytosis Concentration Passive Transport Active Transport Photosynthesis Cellular respiration Carbon dioxide Mitosis Meiosis Sexual reproduction Asexual reproduction Protein doorway Expel Envelop (engulf) Nutrients</p> <p>*Essential Vocabulary listed in the GPS Standards</p> <p>**Supplemental Vocabulary listed in the state frameworks and/or other state document</p>	<p>The resources below are set up in a model lesson format. The first resource is a ppt which provides guidance for the entire lesson including activating, teaching and summarizing strategies. The activities listed below the ppt are used during the lesson and are identified for use where they are most likely appropriate in the ppt. The resources can be used as an entire lesson or pulled out for use separately.</p> <ul style="list-style-type: none"> ▪ Organization of Living Things: Cell Processes ppt [Includes “I Do”, “You Do”, and “We Do”] See “Notes” on ppt slides for suggested instructional approaches where applicable or view the Organization of Living Things: Cell Processes ppt Notes [“You Do”] ▪ Organization of Living Things: Cell Processes Foldable [“You Do”] Students should use the foldable to take notes about all of the cell processes during the lesson ▪ Cell Processes: Photosynthesis and Cellular Respiration Venn Diagram [“You Do” or “We Do”] – For differentiation, you may want to provide the characteristics for some students/classes, but have other students/classes use their notes to generate the similarities and differences ▪ Photosynthesis and Cellular Respiration Activities [“You Do” or “We Do”] <ul style="list-style-type: none"> ○ Photosynthesis Formula Game ○ Photosynthesis Relay Race ○ Photosynthesis and Cellular Respiration Storyboard – [optional activity] Students will use a film strip template(s) to create a storyboard showing the processes of photosynthesis and cellular respiration. Students should start with photosynthesis and conclude with energy being released for use. ▪ Activities/Demonstrations of Diffusion/Osmosis – these are suggested activities, but can be modified to fit the needs of your classroom. All of the activities are not needed to demonstrate the concepts. Additionally, you may consider creating stations of the various activities instead of using just one. [“You Do” or “We Do”] <ul style="list-style-type: none"> ○ Egg-cellent Ideas for Diffusion/Osmosis ○ Diffusion Lab [with Iodine and Corn Starch] ○ Egg Osmosis Egg Osmosis Demo 	<ul style="list-style-type: none"> ▪ S7L2a. Processes of Cells Sample Assessment Items

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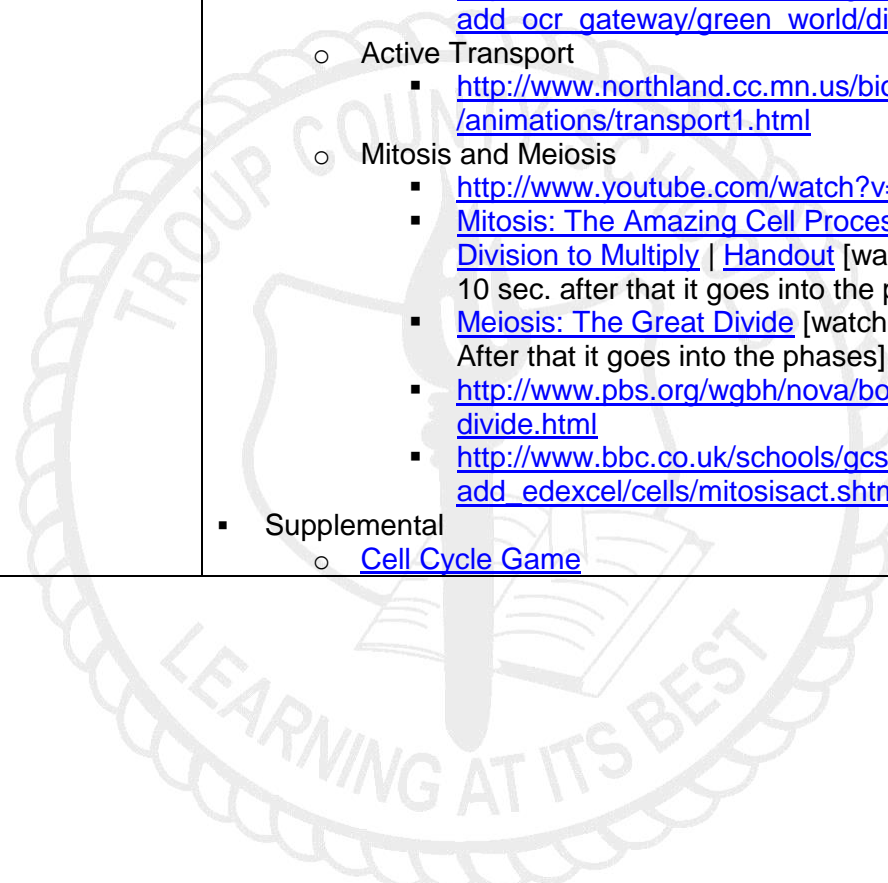
Standard(s) and Essential Question	Vocabulary	Resources [Back to Top]	Assessment
		<ul style="list-style-type: none"> ○ Gummy Bear Diffusion/Osmosis ○ Vegetable Osmosis ○ The Perfect Taters Mystery ▪ Movement of Particles Activities [select 1-2 of the activities if needed] <ul style="list-style-type: none"> ○ Cellular Movement of Particles Practice ["You Do" or "We Do"] – worksheet reviewing diffusion, osmosis, active and passive transport. The sheet may be done individually or in pairs. ○ Modeling Cellular Movement of Particles Activity ["We Do"] ○ Animated Cellular Processes: Passive Transport and Active Transport Activity ["You Do"] – students create flipbooks; use first flipbook for passive and active transport; use the second flipbook for endocytosis and exocytosis ▪ Endocytosis and Exocytosis Activities <ul style="list-style-type: none"> ○ Endocytosis/Exocytosis Activity ["We Do"] – classroom demonstration of the processes ○ Modeling Endocytosis Activity ["We Do"] – Do not share this document with students. It provides the answer and has a few errors in grammar/typos. Use the document as a resource for conducting the activity. ○ Animated Cellular Processes: Endocytosis and Exocytosis – use the second flipbook ["You Do" or "We Do"] ▪ Cell Processes Distributed Summarizing ["You Do"] - Imagine that you are an oxygen molecule, carbon dioxide molecule, glucose molecule or food particle. Write a short story describing your journal into or out of a cell. Be sure to include which process is needed for your entrance/exit and why. Also, include your purpose for entering or exiting the cell. ▪ Mitosis Flipbook 1 Mitosis Flipbook 2 [students are not required to know the actual phases of mitosis] ["You Do" or "We Do"] ▪ Review Activities for Cell Processes <ul style="list-style-type: none"> ○ Cell Processes Image Shuffle Activity ["You Do" or "We Do"] - Students or groups of students will categorize images as one of the cell processes and should explain why each image illustrates each cell process. ○ Cell Processes QR Code Review ["You Do" or "We Do"] – 	

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		<p>Students scan QR Codes to receive a clue about a cell process. They must identify the cell process described.</p> <ul style="list-style-type: none"> ○ Cell Processes Review Cards ["You Do" or "We Do"] – Cards that can be used in a variety of ways to review cell processes; see the document for ideas on ways to use the cards ▪ Cell Processes Summarizer ["You Do"]- Match the cell processes with their correct description ▪ Cell Processes Tiered Activity ["You Do"] – The teacher should use the Cell Processes Summarizer to place students in the tiered groups for differentiated tasks. ▪ McDougal Littell Textbook Pages: [S7L2a.] 5, 9-10, 42-43, 50-52, 56-59, 64-69, 73, 76-78, 285, 344-45; [S7L2d.] 28-31, 316-317, 324-326, 360-362, 585-589, 613-616, 628-631, 38-39 ▪ Videos/Animations [linked in the ppt] <ul style="list-style-type: none"> ○ Photosynthesis and Cellular Respiration <ul style="list-style-type: none"> ▪ http://www.pbs.org/wqbn/nova/nature/photosynthesis.html ▪ http://www.exploratorium.edu/traits/cell_explorer.html ▪ http://glencoe.mheducation.com/sites/dl/free/0078778425/164155/00053412.html ▪ http://www.sumanasinc.com/webcontent/animations/content/cellularrespiration.html ○ Passive Transport: Diffusion and Osmosis <ul style="list-style-type: none"> ▪ https://www.youtube.com/watch?v=Pt4Ch-YW-xs [semi-permeable] ▪ http://www.sumanasinc.com/webcontent/animations/content/diffusion.html ▪ http://esminfo.prenhall.com/science/BiologyArchive/lectureanimations/closerlook/diffusion.html ▪ http://highered.mheducation.com/sites/0072495855/student_view0/chapter2/animation_how_diffusion_works.html ▪ http://www.bbc.co.uk/schools/gcsebitesize/science/add_aqa_pre_2011/cells/osmosisact.shtml ▪ http://www.stolaf.edu/people/giannini/flashanimat/transport/osmosis.swf 	

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		<ul style="list-style-type: none"> ▪ http://www.abpschools.org.uk/page/modules/homeostasis_kidneys/kidneys3.cfm?coSiteNavigation_al/Topic=1 ▪ Diffusion and Osmosis: <ul style="list-style-type: none"> ▪ http://www.bbc.co.uk/schools/gcsebitesize/science/add_ocr_gateway/green_world/diffusionact.shtml ○ Active Transport <ul style="list-style-type: none"> ▪ http://www.northland.cc.mn.us/biology/Biology1111/animations/transport1.html ○ Mitosis and Meiosis <ul style="list-style-type: none"> ▪ http://www.youtube.com/watch?v=GO5YN_t1fgw ▪ Mitosis: The Amazing Cell Process that Uses Division to Multiply Handout [watch first 5 mins. 10 sec. after that it goes into the phases of mitosis] ▪ Meiosis: The Great Divide [watch the first 3 mins. After that it goes into the phases] ▪ http://www.pbs.org/wqbh/nova/body/how-cells-divide.html ▪ http://www.bbc.co.uk/schools/gcsebitesize/science/add_edexcel/cells/mitosisact.shtml ▪ Supplemental <ul style="list-style-type: none"> ○ Cell Cycle Game 	



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Essential Question and Standard(s)	Vocabulary	Resources [Back to Top]	Assessment
<p><u>Standard(s):</u> S7L2d. Explain that tissues, organs, and organ systems serve the needs cells have for oxygen, food, and waste removal</p> <p>S7L2e. Explain the purpose of the major organ systems in the human body (i.e., digestion, respiration, reproduction, circulation, excretion, movement, control and coordination, and for protection from disease)</p> <p><u>Essential Question:</u> 4. How do major organ systems work together in living organisms?</p>	<p><u>Essential*</u> Skeletal System Nervous System Muscular System Respiratory System Digestive System Circulatory System Integumentary System Excretory System Lymphatic System Immune System Endocrine System Urinary System Reproductive System</p> <p><u>Supplemental**</u> Control Movement Protection Acquire (energy) Coordination Cardiovascular System See content map for individual organs of each system</p> <p>*Essential Vocabulary listed in the GPS Standards</p> <p>**Supplemental Vocabulary listed in the state frameworks and/or other state document</p>	<p>The resources below are set up in a model lesson format. The first resource is a ppt which provides guidance for the entire lesson including activating, teaching and summarizing strategies. The activities listed below the ppt are used during the lesson and are identified for use where they are most likely appropriate in the ppt. The resources can be used as an entire lesson or pulled out for use separately.</p> <ul style="list-style-type: none"> ▪ Introduction to Systems of the Body ppt [Includes “I Do”, “You Do”, and “We Do”] See “Notes” on ppt slides for suggested instructional approaches where applicable or view the Introduction to Systems of the Body ppt Notes [see page 585 in the McDougal Littell textbook for how the human body is like a city] <ul style="list-style-type: none"> ○ Body Systems Working Together Activity [“We Do”] – this activity can be modified or another activity used in its place. The point is for students to understand that organ systems rely on one another. ○ Demonstration of Body System Interdependence [“I Do”] [demonstration shows how a cancerous cell starts out in a single cell and ultimately affects the entire organism] ○ Systems of the Body Video [linked in ppt]: ▪ Systems of the Body Graphic Organizers [“You Do”] Students use the graphic organizers to take notes during all of the lessons and they can be used at the end of the unit to create a systems of the body book. Note: Graphic organizers to be used with all PowerPoints for this unit. ▪ Skeletal, Muscular, Nervous System ppt [Includes “I Do”, “You Do”, and “We Do”] - this ppt has videos embedded in slides] See “Notes” on ppt slides for suggested instructional approaches where applicable or view the Skeletal, Muscular, Nervous System ppt Notes <ul style="list-style-type: none"> ○ Muscle Model Activities Making Muscles Move [“You Do” or “We Do”] ○ http://kidshealth.org/kid/interactive/muscles_it.html#cat20579 Information and then animation showing joints and muscle movement ○ Nervous System Study Jams ○ http://kidshealth.org/kid/htbw/_bfs_MSmoviesource.html [video on muscles with some nervous] 	<ul style="list-style-type: none"> ▪ S7L2d. and S7L2e. Human Body Sample Assessment Items

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- [Jumpin' the Gap \["We Do"\]](#) – Create a giant synapse [aspects of this activity are more complex than needed for the standard, but the activity can be modified to an easier version]
- Activating Strategy: Respiratory & Circulatory Activity ["You Do"] – Have students record their at rest pulse. Then have students do jumping jacks beside their desk or outside for 2-3 minutes. After calling time have students record their pulse rate again. Ask the students to describe the activity and explain why they are breathing harder and their pulse rate is faster after the activity. An more extensive version of the activity can be found on page 648-649 of the McDougal Littell textbook
- [Respiratory & Circulatory System ppt \[Includes "I Do", "You Do", and "We Do"\]](#) See "Notes" on ppt slides for suggested instructional approaches where applicable or view the [Respiratory & Circulatory System ppt Notes](#) [this ppt has videos embedded in slides]
 - [Model of the Lung Activity \["I Do" or "We Do"\]](#) – teacher demonstration or small group activity
 - [Respiration Stations \["We Do"\]](#) – The activity suggests using a small group of students to demonstrate. If possible, divide students into multiple small groups where each group does the activity
 - Additional videos that may be used:
 - [Circulatory System Study Jams](#)
 - [Oxygen Transport from Lungs to Cells](#) Video clip [note: stop the video after about 1:57]
 - <http://www.sciencekids.co.nz/videos/humanbody/circulatorysystem.html>
 - <http://www.sciencekids.co.nz/videos/humanbody/respiratorysystem.html>
- [Digestive, Urinary, and Excretory System ppt \[Includes "I Do", "You Do", and "We Do"\]](#) See "Notes" on ppt slides for suggested instructional approaches where applicable or view the [Digestive, Urinary, and Excretory System ppt Notes](#) [this ppt has videos embedded in slides]
 - Digestive System demonstration: http://www.teachengineering.org/view_lesson.php?url=http://www.teachengineering.org/collection/cub_/lessons/cub_biomed/cub_biomed_lesson05.xml ["I Do" or "We Do"]
 - Digestive System Interactive:

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		<p>http://science.nationalgeographic.com/science/health-and-human-body/human-body/digestive-system-article/</p> <ul style="list-style-type: none">○ Demonstrate the function of the kidneys and the meaning of filter by using coffee and a coffee filter ["I Do"]○ Skin as an excretory system organ: Page 628 in the McDougal Littell textbook. Teacher demonstration or student activity ["I Do" or "We Do"] - place a plastic bag over the hand and tape it loosely around the wrist. Leave the bag on for five minutes and write down the changes you see▪ Protection from disease PPT [Includes "I Do", "You Do", and "We Do"] See "Notes" on ppt slides for suggested instructional approaches where applicable or view the Protection from Disease ppt Notes<ul style="list-style-type: none">○ Viral Attack Comic – comic book story describing the function of the immune system○ Immune System Video DOES NOT WORK○ Magic School Bus Immune System [16 minutes long] DOES NOT WORK Also linked in ppt▪ Endocrine System ppt [Includes "I Do", "You Do", and "We Do"] See "Notes" on ppt slides for suggested instructional approaches where applicable or view the Endocrine System ppt Notes<ul style="list-style-type: none">○ Endocrine System Video [linked in ppt]:○ Teacher Demonstration: Fill a plastic bag with colored water. Poke a small hole in the bag with a pin. Hold the bag over a sponge and allow some colored water to drip on it. Ask: What correlates to a gland? the bag; What correlates to a hormone? the colored water; What is the sponge? the target organ▪ Reproductive System<ul style="list-style-type: none">○ Use pages 694-696 in the McDougal Littell textbook to provide students with an overview of the reproductive system. Students should use these pages to fill in the "role" of the Male and Female Reproductive Systems on the graphic organizer used throughout the lesson▪ Systems of the Body Matching Worksheet ["You Do"] – May be used as the summarizer for the entire lesson on system of the body; worksheet where students match the system of the body to its function▪ Differentiation: Use the Systems of the Body Matching sheet as a formative assessment to collect data for differentiation. If a	
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student gets 9 or more correct, they are placed into the “On Target” group. If a student gets 8 or less correct, they are placed into the “Support” group. Students in the “Support” group will review the systems of the body by playing Kaboom with the [Body Systems Review Cards](#). Students placed in the “On Target” group will play the [Systems of the Body Wild Side Cube Game](#) which requires students to identify the relationships between systems of the body.

- [Systems of the Body Constructed Response \[“You Do”\]](#) – Students choose three body systems from a list and describe how those three body systems work together when you bite into a cracker to change the cracker into a form that can be used by your body’s cells
- Activities for Reviewing the Systems of the Body
 - Systems of the Body Animated Review – There are two versions of this activity. One version is to have students work in groups of 2-3 to scan QR Codes to view animations. If teachers cannot do the QR version of the activity, teachers can still put the students in groups of 2-3 and show the ppt version. Both versions use the same student handout to record answers.
[Systems of the Body Animated Review Student Handout](#) [the handout includes the QR Codes] [“You Do” or “We Do”]
 - [Systems of the Body Animated Review ppt](#)
 - [Systems of the Body Wild Side Cube Game](#) | [Systems of the Body Interaction Key](#) – game in which students roll cubes and then describe how the two systems of the body “rolled” are related [“You Do” or “We Do”]
 - [Body Systems Review Cards](#) [“You Do” or “We Do”] – review cards can be used in a variety of ways to review systems of the body; see the document for specific ideas on using the review cards
 - [Body BINGO](#) [differentiated] – Students review major organs of each system [“You Do” or “We Do”]
- McDougal Littell Textbook Pages: [S7L2d.] 28-31, 316-317, 324-326, 360-362, 585-589, 613-616, 628-631, 38-39; [S7L2e.] 590-597, 613-629, 641-645, 78, 650-653, 659, 661-662, 682-683, 686-687, 694-696, 598-605
- Additional Resources
 - <http://www.innerbody.com> [interactive guide to the human

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		<p>body, but more for anatomy than 7th grade science overview of the human body</p> <ul style="list-style-type: none">○ Human Body Systems Rap○ The Organ Trail ["You Do"] – student project where students gather information about a specific organ and then created a Wanted Poster○ Human Body Quest ["We Do"] – group presentation on specified systems of the body	
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