Diagram parts of a flower worksheet grade 4

I'm not robot!

## Diagram parts of a flower worksheet grade 4

Bug Blitz - Study in Biodiversity Microscope Mania Ecology Basics (Digital notebook available) Pond Water Survey Lessons from the Lorax Animal Classification Challenge Incredible Cells Construction Zone & Classroom Cell Project Mitosis Flip Books Genetics with a Smile + SpongeBob Genetics DNA Keychains & Replication Protein Power Game Egg-cellent Ideas for Osmosis & Diffusion Human Body Activities (Body Systems, Skeletal System) Also check out ... Silly Science - A dichotomous key activity in General Science section! More lessons for Biology are available at The Nature Center - Lesson Page - Explore an assortment of lesson ideas and links to explore the natural world. Adopt-An-Insect Project - Activities, Worksheets, and links to investigate the insect world! Eagle Days Lesson Plan Links for Biology - Links to my favorite online resources for lesson plans, activities, and worksheets. NOTE: As of 2/12/2022, all links previously availble on the Kid Zone are now listed on the Kid Zone Archive document. Please provide the links your students need for assignments through your LMS or teacher website. UPick Projects - Ecology or Biology - Students pick the projects they want to complete to earn points. Each box can only be completed once, but they can do extra boxes to earn extra credit points. I have included a list of vocabulary from our Ecology unit, which is also accessible on Quizlet. Finding Nemo - One of my 8th grade students developed this lesson as an end-of-the-year activity to review ecology concepts covered during first quarter. The PPT provides the answers for the activity as well as links to additional resources. The link to the digital slides for students is on the first slide. Solve the Outbreak (CDC) - This website from the CDC provides 12 cases in Level 1 for students to investigate. I divided them into 3 groups and had each student complete 4 of the cases. After the activity, we discuss the results and shared our observations. This activity was a great lead in for a discussion on the influenza and coronoavirus. Resources available include the student worksheet with teacher directions and the PowerPoint with instructions for the website and explore the concept of natural selection. The first activity has students watch an EDPuzzle video from the Ameoba Sisters to complete a note worksheet about natural selection in antibiotic resistance. The second activity explores the Peppered Moths website, which includes background information and a game to challenge them to "eat" moths in two different forests. A digital version of this lesson is available as a Google Slide worksheet. Waggle Dance Activity - The PowerPoint outlines the lessons I used during our Adaptations & Behaviors unit. The activity also includes a game to challenge them to use the clues from various dances to find the correct flowers. I also included a video that explains the waggle and round dances that helped them understand what to do during the game. A digital version of this lesson is available as a Google Slide worksheet. The Organ Trail - Challenge your students to create a "Wanted" poster about an organ. This download provides project guidelines, student information, and project worksheets. Links for students can be found on the Kid Zone Archive document. A digital version of this activity is now available! EDPuzzle - Ecology Basics - Students watch three videos on EDPuzzle to complete the notes. Each video includes a built-in quiz with question students must answer to continue watching If you have an EDPuzzle account (it's free), you can set up accounts for students to track their progress. Reviewing the quiz responses will help you identify areas that need further instruction and learning activities. Video links - Intro to Ecology, Serious Science: Biological Carrying Capacity, & Population Ecology (Mosquito Mystery) Check out the NEW Digital version n the Ecology Basics unit below! Ology Think & Link - This activity can be used with lesson about food webs or biodiversity. The students explore two websites to find connections betweens the organisms that live there. It is one of the lessons from the Ecology Basics unit below! Jeff Corwin - Madagascar (Optional) - This video lesson follows Corwin's exploration of Madagascar and its unique creatures. It can be used with any of the lessons in this unit or as a reinforcement for animal defenses and adaptations. It is one of the lessons from the Ecology Basics unit below! Food Webs Online - Students use online resources to find information about food chains and webs. The final activity challenges students to create their own food webs to help their organisms for each student or you can allow them to pick their own. Links for students can be found on the Kid Zone Archive document. Check out the NEW Digital version n the Ecology Basics unit below! Classification of Life - I use this worksheet during a unit on classification. Links for students can be found on the Kid Zone Archive document. Flower Basics - I use this worksheet during the genetics unit to review the parts of a flower and introduce self-pollination and cross-pollination. A link to the video is available in the PowerPoint presentation for this lesson. Fungus Jeopardy - A worksheet that challenges students to identify different types of fungi based on the clues provided. Genetics Ethics - This powerpoint provides links to three online videos along with related discussion questions to explore the ethical issues surrounding genetics and genetic engineering. Classroom Lessons Bug Blitz - A Study in Biodiversity (T. Tomm, Havana Junior High, Havana, IL) Targeted Concepts: Living things, classification, scientific investigations, process skills (observation, data collection, analysis, etc.), biodiversity In past years our district had money for field trips to local nature areas for the Butterfly Brigade project; however, budget cuts made it difficult to pay for transportation. I decided to adapt the project to a smaller level using our school garden, which is a quick walk to our front schoolyard! I started this new project in the fall of 2016 as part of my Ecology unit for my 8th grade students. The goal of project was to investigate biodiversity by documenting the bug populations that could be found there. This project was a huge hit with the students - not only catching/documenting the bugs, but also implementing the bugs, but also Blitz Project Information file (includes links to the PPT and worksheets as well as information regarding learning standards.) Also available ...Insect-related lessons and activities Microscope Mania (T. Tomm, Havana Junior High, Havana, IL) Targeted Concepts: Microscopes - history and uses, lab safety, classification (if using pond water) After learning about the basic parts of a microscope and an overview of the proper procedures for using them, my students visit 5 lab stations to learn more about the materials needed to complete the activities. Download the Teacher Notes below for a description of the station activities as well as a list of materials students need. Unit objectives and extension ideas are also provided. NOTE: I developed this lab to deal with increasing class sizes and a limited amount of microscopes. With the stations, I am able to set up groups of 5-6 students and the students enjoy not having to share microscopes. I tend to focus my efforts on the groups at stations 3 & 4 as the others can be completed with little assistance from the teacher with the exception of a few visits to keep everyone on task. Microscope Mania Unit Materials: Teacher Notes (pdf) - Provides an overview of the unit as well as a description of the station activities and materials needed. Station Cards (pdf) - Provides information cards for each one. An answer key is provided. Review Activities (pdf) - These review materials go with Station 5 of the unit and includes a vocabulary challenge and "label the parts" microscope Mania station cards. Microscope Mania station to the world of microscope search and make-a-word challenge. I provide this worksheet with the students can work on the puzzles using any extra time they have after finishing station activities. Microscope Mania Review Crossword (pdf) - I use this puzzle as a review for the unit test. An answer key is also available. Microscope Mania Review Crossword (pdf) - I use this puzzle as a review for the unit test. An answer key is also available. Microscope Mania Review Crossword (pdf) - I use this puzzle as a review for the unit test. An answer key is also available. Microscope Mania Review Crossword (pdf) - I use this puzzle as a review for the unit test. An answer key is also available. Microscope Mania Review Crossword (pdf) - I use this puzzle as a review for the unit test. An answer key is also available. Microscope Mania Review Crossword (pdf) - I use this puzzle as a review for the unit test. Class Presentation - Updated 2021 - Download the PPT file to access the slides for the classroom lessons as well as links to the digital student notebook and other online resources used for the activities, such as EDPuzzle and GimKit. NOTE: The digital slides are set up to 11x8.5 landscape allowing you to print slides for students needing paper copies. You will need to provide copies of the PPT for more details about how I make my sample gallery worksheet for students to record their pets! Check the first slide of the PPT for more details about how I make my sample "slides". A link to the digital notebook for students is also provided on the first slide. Other resources for microscopes ... Microscope Basics Presentation (PDF) and Student Worksheet (PDF) - I use this presentation at the beginning of the microscope unit to review the parts of the microscope, discuss magnification, and review how to use a microscope as well as directions on how to make wet-mount slides. Parts of a Microscope Notes (pdf) - A basic lesson with an overhead key and student worksheet related to the parts of a microscope. Microscope Quiz 2 (pdf) - This quiz includes sections on labeling the parts of a microscope as well as questions about power of magnification. Microscope Specimen Cards (pdf) - Small cards students can use to document the different specimens they view with the microscope Online (Internet Lessons) UPDATED 2021- Use these worksheets to explore the history of the microscope as well as use a virtual microscope from the BioNetwork to experiment with powers of magnification. NOTE: I have included the links available through Google Classroom, a class website, or other online method. | Back to top | Ecology Basics (T. Tomm, Havana Junior High, Havana, IL) Targeted Concepts: Ecological organization, population ecology, symbiosis, food webs, biodiversity, ecological succession Now available in a digital format - Each topic listed below is linked to a PPT presentation to be used for classroom lessons and activities. Slides related to unit vocabulary and learning targets are also included. A link to the student digital notebook and other online resouces are included in each PPT. Check out the first two slides of each presentation, etc.) along with an overview of population ecology. Includes links to the EDPuzzle videos used for the student note portions. Since I often do this unit at the start of the school year, the mosquitoes mentioned in the population ecology video are a great time for us to complete the Bug Blitz project (listed above) investigating the biodiversity of "bugs" in the school garden. It also provides a lot of connections to the topics in the various lessons in the Ecology unit. Symbiosis along with a Good Buddies game to investigate additional relationships in a "go fish" style card game. Food Webs - Students complete a graphic organizer as they watch two EDPuzzle videos. Related lessons include two more food webs with questions for students to ponder along with a new digital version of the Pond Water Webs activity listed below. NOTE: We usually complete the microscope unit (see above) prior to this lesson, which gives the students some background knowledge of the pond water organisms for the pond water food web activity. Biodiversity - Explore the basics of biodiversity and the impact of invasive species. Download includes links to the Wanted Poster Template (Google Slide) - Students research an invasive species to complete this wanted poster. I print the best ones to display in the hallway, which prompts many discussions as people recognize some common organisms that are found in our area. Most did not realize they were a "wanted" species for their crimes against nature. Click HERE for a PowerPoint you can use to introduce the project. I also have a LIST of species I used for students to select their organisms as well as a PDF version of the poster you can print and use. Ology Think & Link (Optional) - This activity can be used with either the food webs or biodiversity lessons listed above. Madagascar (Optional) - This video lesson follows Corwin's exploration of Madagascar and its unique creatures. It can be used with any of the lessons in this unit or as a reinforcement for animal defenses and adaptations. Ecological Succession - Students complete the note portion to provide an overview of primary and secondary succession. Addional activities include a diagram to label as well as a video to reinforce their knowledge of the topic. Gizmos - Pond Ecosystem (Subscription) - This activity was developed to incorporate student observations during the pond ecosystem exploration. Gizmos - STEM Case: Ecosystem (Subscription) - This activity would be a great one to review the major concepts in the unit as students investigate to determine how the introduction of wolves impacted the Yellowstone ecosystem. Human Impacts - Lessons from the Lorax - Students watch the original movie as well as the newest version to compare/contrast how environmental issues were portrayed 50 years ago as well as today. The assignment includes questions to challenge students to identify environmental issues and the ways humans impact our natural resources. They also calculate their friends and family to be "guys and gals that care" by finding ways to lower their footprints. NOTE: Links to the digital files for students are included in the PPT linked above. A PDF version of the challenge project is available HERE. | Back to top | Pond Water Survey (T. Tomm, Havana Junior High, Havana, IL) Targeted Concepts: Living things, classification, scientific investigations, microscopes, process skills (observation, data collection, analysis, etc.), food webs (if additional lesson is included) An easy way to fascinate your students is to allow them to investigate samples of pond water (whether a large farm pond or small backyard pond.) They are sure to find little critters zooming around the slide. You will need to gather several samples (or have the students bring in their own), microscopes, and identification guides. Golden Guide publishes an inexpensive Pond Water booklet that contains lots of pictures and information. Follow-up discussions of finds will provide students with the chance to use biological terms to compare and contrast different forms of life. The updated version listed below includes additional lesson activities challenging students to create food chains using plants and animals found in or near a pond. It also includes templates for aquatic invertebrate trading cards. A great resource for teachers with little biology background is to check with your local Department of Conservation or Natural History Survey. I was able to recruit a couple biologists along with their cool equipment and samples to work along with my students during class. My students during class. My students are able to create a video documentary of our pond organisms. Each spring and fall we document our research and compare the changes that occur throughout the year. Lesson Resources: Pond Water Survey (pdf) - Investigate food chains and webs that exists in a pond habitat. Download includes teacher notes, student worksheet, answer key, and Life in a Pond cards. A Power Point presentation is also available for use with interactive whiteboards. Need identification guides? Links to identification guides for pond water critters can be found on the Kid Zone Archive document. | Back to top | Lessons from the Lorax (T. Tomm, Havana Junior High, Havana, IL) Targeted Concepts: Environmental concerns, human impacts on the ecosystem, conservation, natural resources At the end of our environmental concerns and find ways to live a lifestyle with the smallest "footprint". It also provides a great connection to the many topics we discuss related to deforestation, habitat loss, pollution, and human impacts on the Earth. Digital Version: Lessons from the Lorax - Students watch the original movie as well as the newest version to compare/contrast how environmental issues were portrayed 50 years ago as well as today. The assignment includes questions to challenge students to identify environmental issues and the ways humans impact our natural resources. They also calculate their eco-footprints and are challenged to create a project to motivate their friends and family to be "guys and gals that care" by finding ways to lower their footprints. NOTE: Links to the digital files for students are included in the PPT linked above. A PDF version of the challenge project is available HERE. Paper Version: Students complete Part A of the student worksheet while watching the The Lorax Movie (1972 version). We discuss the answers to Part B in class, and then we watch the newest version to respond to the question prompts in the Lessons from the Lorax PowerPoint. The PPT includes an answer key and the discussion questions along with a follow-up activity. Using my general EcoFootprint calculator, students complete the "footprint" with the different categories (page 2 of the download). They use the results to determine how many planets we would need if everyone lived like they do. It is always an eye opening experience, which leads into the final lessons where they decorate the blank footprint with strateges they and their families will use to reduce their footprints. Lorax Lessons on FlipGrid - Students explain why the "Unless" quote is still important today and share two things they are doing to make the planet better. This lesson is incorporated into the challenge below. Earth Day Challenge - I created this choice board assignment based on pasts Earth Day activities. It has both Internet and non-Internet activities. The FlipGrid lesson above is incorporated into the assignment as one of the choices. Click HERE for a link to the Google Slides template you can copy to use with your students. NOTE: I have also prepared a paper packet version for my kiddos who do not have Internet. I will print copies to send home for those students. It includes "proof" pages similar to the Google Slides along with flash card templates, graph paper for a crossword puzzle, and other information they may need. I have a few copies of an old "Earth Day" booklet I plan to send home as I only have 10 students who need paper verions. Also available ... My version of the Earth Day Challenge (Electronic option only) I modified the basic one above to to create a new choice board (with hyperlinks built in) to include many of the online activities we have used in class - Quizlet, GimKit, Legends, and online tools (Poster My Wall, FlipGrid, video creators, etc.). Clink THIS LINK to view it on Google Slides template to turn in proof for all completed tasks. It will be shared with the students on Google Classroom by choosing "create a new copy" for each student. | Back to top | Classification, binomial nomenclature, invertebrates, vertebrates I designed this activity to allow students to practice invertebrate and vertebrate and vertebrate classification unit. Teacher notes, student worksheets, and organism cards are included in the downloades listed below. You will also need the classification unit. Teacher notes, student worksheets, and organism cards are included in the downloades listed below. You will also need the classification unit. mat. Classy Invertebrates: Invertebrates: Invertebrates PowerPoint (PDF), Classification Mat (PDF), Invertebrates PowerPoint ( Classification Mat (PDF), Critter Cards (PDF), Vertebrate Classification of Life - I use this worksheet during our classification unit at the beginning of the year. Links are available on the Kid Zone! Silly Science - a dichotomous key activity in General Science section! | Back to top | Incredible Cells (T. Tomm, Havana Junior High, Havana, IL) Targeted Concepts: Living things, cells (plant and animal), organelles and their functions The "edible" version of this project was an annual favorite was adapted from the old Jello cells! The project is a great addition to any cell unit and provides a tasty treat for your students. Refer to the Student Worksheet below for details and instructions. The download also includes a student worksheet for a nonedible version. Student Worksheets: Incredible Cells (pdf) Another idea ... Science Wear - Aprons, Shirts, or Lab Coats decorated with cells as well as options for astronomy, chemistry, and more! Thanks to Jody Hodges for developing this great project! Students use permanent markers or fabric paint to create their own attire by coloring the lettering and adding diagrams of cells. Visit her webpage on Facebook for more details and pictures of completed projects! | Back to top | Construction Zone (T. Tomm, Havana Junior High, Havana, IL with inspiration from Stacy Baker) Targeted Concepts: Living things, cells (plant and animal), organelles and their functions This project was created for 5th grade students at my school to give them an "inside" view of a cell. Students work as construction teams to build a 3-D model of a cell. They are required to label the organelles with names and functions. Students have used PVC pipe for frames or obtained large boxes from our local appliance store. Students have used PVC pipe for frames or obtained large boxes from our local appliance store. Students have used PVC pipe for frames or obtained large boxes from our local appliance store. Students have used PVC pipe for frames or obtained large boxes from our local appliance store. Tomm & C. McDaniel, Havana Junior High, Havana Junior High, Havana, IL) Targeted Concepts: Living things, cells (plant and animal), organelles and their functions Print out the Classroom Cell necklaces and assign "jobs" to the students that mimic the organelles of the cell, while a student that is a lysosome would help "clean up" the classroom each day. Our 6th grade teacher uses this activity and I refer back to it while discussing cells and organelles in our 7th & 8th grade lessons. It is one of the lessons they remember! | Back to top | Mitosis Flip Books (T. Tomm, Havana Junior High, Havana, IL) Targeted Concepts Mitosis, cell division, organelles and their functions This project (passed down to me from a fellow teacher) is based on the old cartoon flip book idea. Students use template cards (printed on cover stock or glued to index cards) to create a booklet that illustrates the steps involved in cell division. After reviewing the stages in cell division (see the Mitosis Note page below), I provide a set of templates (see Mitosis Book below) for them to use to make a flip book. From phase to phase, they must draw diagrams to show the changes that occur throughout the process. I encourage "color coding" to make the end effect easy to follow. Once all the Pages are completed and in the correct order, students use a heavy duty stapler to bind them together. They can flip through the pages and "see" mitosis in action. Mitosis Flip Books Also available ... | Back to top | Genetics with a Smile (T. Tomm, Havana, IL) Targeted Concepts: Living things, genetics, inherited traits, genotype, dominant/recessive During this activity students use pennies to determine the traits for a smiley face, then use Microsoft Word to create the smiley face, then use Microsoft Word to create the smiley face, then use Microsoft Word to create the smiley face, then use Microsoft Word to create the smiley face, then use Microsoft Word to create the smiley face, then use Microsoft Word to create the smiley face, then use Microsoft Word to create the smiley face, then use Microsoft Word to create the smiley face, then use Microsoft Word to create the smiley face, then use Microsoft Word to create the smiley face, then use Microsoft Word to create the smiley face, then use Microsoft Word to create the smiley face, then use Microsoft Word to create the smiley face, then use Microsoft Word to create the smiley face, then use Microsoft Word to create the smiley face, then use Microsoft Word to create the smiley face, then use Microsoft Word to create the smiley face, then use Microsoft Word to create the smiley face, then use Microsoft Word to create the smiley face, then use Microsoft Word to create the smiley face, then use Microsoft Word to create the smiley face, then use Microsoft Word to create the smiley face, then use Microsoft Word to create the smile word to • Connect with another classroom and share your results with them! Challenge students to summarize the similarities and differences between the smileys as "new" parents and then flip a penny to determine the traits for a new baby. The students can then draw the baby smiley and compare the results to the parent smileys. (Thanks to Nancy Nega for this great idea!) • Another twist for the new baby idea - instead of making just one baby, have the students create a display that shows the possible outcomes if two smileys had a baby. Students can provide expected rates of occurrence for each trait based on the parent's traits and compare those to the results of their classmates. Other goodies for genetics... Punnet Square Practice - Thanks to Peggy Lenz for sharing this powerpoint and directions that she uses to review for the test. Genetics with Sponge Bob (pdf) What happens when SpongeBob SquarePants marries SpongeSusie RoundPants? Explore the genetics of Sponge Bob and his pals! An answer key is provided! Click HERE to access the online tutorial for students. Genetics with SpongeBob 2 (pdf) A second helping of Bikini Bottom fun exploring the genetics of SpongeBob 2 (pdf) A second helping of Bikini Bottom fun exploring the genetics of SpongeBob 2 (pdf) A second helping of Bikini Bottom fun exploring the genetics of SpongeBob 2 (pdf) A second helping of Bikini Bottom fun exploring the genetics of SpongeBob 2 (pdf) A second helping of Bikini Bottom fun exploring the genetics of SpongeBob 2 (pdf) A second helping of Bikini Bottom fun exploring the genetics of SpongeBob 2 (pdf) A second helping of Bikini Bottom fun exploring the genetics of SpongeBob 2 (pdf) A second helping of Bikini Bottom fun exploring the genetics of SpongeBob 2 (pdf) A second helping of Bikini Bottom fun exploring the genetics of SpongeBob 2 (pdf) A second helping of Bikini Bottom fun exploring the genetics of SpongeBob 2 (pdf) A second helping of Bikini Bottom fun exploring the genetics of SpongeBob 2 (pdf) A second helping of Bikini Bottom fun exploring the genetics of SpongeBob 2 (pdf) A second helping of Bikini Bottom fun exploring the genetics of SpongeBob 2 (pdf) A second helping of Bikini Bottom fun exploring the genetics of SpongeBob 2 (pdf) A second helping of Bikini Bottom fun exploring the genetics of SpongeBob 2 (pdf) A second helping of Bikini Bottom fun exploring the genetics of SpongeBob 3 (pdf) A second helping of Bikini Bottom fun exploring the genetics of SpongeBob 3 (pdf) A second helping of Bikini Bottom fun exploring the genetics of SpongeBob 3 (pdf) A second helping of Bikini Bottom fun exploring the genetics of SpongeBob 3 (pdf) A second helping of Bikini Bottom fun exploring the genetics of SpongeBob 3 (pdf) A second helping the genetics of SpongeBob 3 (pdf) A second helping the genetics of SpongeBob 3 (pdf) A second helping the genetics of SpongeBob 3 (pdf) A second helping the genetics of SpongeBob 3 (pdf) A second helping the geneti tutorial for students. Genetics with SpongeBob - Incomplete Dominance (pdf) This worksheet provides several practice problems related to incomplete Dominance with Poofkins (a special kind of flower) and Goobers (a worksheet above that includes co-dominance for the Poofkins (flowers) and incomplete dominance for the Goobers (jellyfish). An answer key is provided. Click HERE to access the online tutorial for students to complete dihybird crosses. Genetics with SpongeBob Review (pdf) Use this worksheet to review Punnett Squares. An answer key is provided. SpongeBob Genetics with this SpongeBob SquarePants and all related characters are trademarks of Viacom International Inc. Genetics Challenge puzzle (pdf) - I use this worksheet to review key terms from our unit on genetics. Genetics Word Search (pdf) - A word search with terms from genetics. Challenge Answers: Chargaff, Crick, Watson, Franklin, Mendel, and Wilkins Genetics Ethics - This powerpoint provides links to three online videos along with related discussion questions to explore the ethical issues surrounding genetics? Visit the Genetics Lesson Plan Links page! | Back to top | DNA Keychains Targeted Concepts: DNA, structure (nucleotides, backbone), replication My students make DNA key chains (original idea from DNA Jewelry that was part of the Access Excellence Collection) from beads and wire and then use them for a lesson about DNA replication. Activity Files: DNA Keychain Guide (pdf) - Provides an overview of the activity as well as list of materials, tips, and a student guide. DNA Keychains (PPT) - A Power Point presentation to use as students make the keychains and includes an answer key for the DNA Replication process using the student-made keychains. The worksheet also introduces the process of protein synthesis. |Back to top | Protein Power Point presentation to use as students make the keychains. Game (T. Tomm, Havana Junior High, Havana, IL) Targeted Concepts: DNA, RNA, structure (nucleotides, backbone), replication, protein synthesis and reinforce the functions of various cell organelles. It was a big hit with the kids and we referred back to it many times throughout the unit. Although it may be challenging at first, the students quickly catch on to the "jobs" and compete to see which class could get the fastest time! Game Files: Also available ... Cell Organelle Chart (pdf) - Students cut apart small cards to use to complete the chart that outlines the functions of each organelle as well as memory clues that can be used to help them remember the functions. I allow my students to use their own memory clues if they want to create their own memory clues that can be used to help them remember the functions. I allow my students to use their own memory clues if they want to create their own memory clues if they want to create their own memory clues if they want to create their own memory clues if they want to create their own memory clues if they want to create their own memory clues if they want to create their own memory clues if they want to create their own memory clues if they want to create their own memory clues if they want to create their own memory clues if they want to create their own memory clues if they want to create their own memory clues if they want to create their own memory clues if they want to create their own memory clues if they want to create their own memory clues if they want to create their own memory clues if they want to create their own memory clues if they want to create their own memory clues if they want to create their own memory clues if they want to create their own memory clues if they want to create their own memory clues if they want to create their own memory clues if they want to create their own memory clues if they want to create their own memory clues if they want to create their own memory clues if they want to create their own memory clues if they want to create their own memory clues if they want to create their own memory clues if they want to create their own memory clues if they want to create their own memory clues if they want to create their own memory clues if they want to create their own memory clues if they want to create their own memory clues if they want to create their own memory clues if they want to create their own memory clues if they want to create their own memory clues if they want to create the create Protein Synthesis Drama (Submitted by Steve Tester, Alexandria City Public Schools, VA) For this activity exploring protein synthesis process. Download the files below for complete details- Protein Synthesis Outline (pdf) and Protein Synthesis Activity Codes (pdf) | Back to top | Egg-cellent Ideas for Osmosis and Diffusion (Submitted by Sue Remshak, Lake Bluff Middle School, Lake Bluff, IL) Targeted Concepts: Cell processes, osmosis, diffustion, science process skills (observations, hypothesis, data collection, analysis) During this activity students investigate the concepts of osmosis and diffusion using eggs. To prepare for the activity, have students carefully measure and record their observations. Store the egg in a beaker filled with white vinegar and allow time for students to record their observations. Return the egg to the refrigerator for another 24 hours. After 48 hours have elapsed, observe the egg's appearance. Students should carefully remove the egg from the beaker and record its measurements. Allow time for students to write an explanation of their observations using the correct vocabulary. Teacher Info: A chemical reaction occurs between the vinegar and the calcium carbonate in the egg shell. The bubbles of carbon dioxide that form on the egg and rise to the surface of the vinegar and leaves a film on the surface are evidence of this reaction. The shell dissolves in the vinegar and leaves a film on the surface of the winegar. However, the membrane remains on the egg increases because of the movement of water in the vinegar. through the cell membrane. Since water moves from an area of high concentration to an area of low concentration, this process is called osmosis. Obviously, none of the activity, you will need plain water, blue water (food coloring in water), molasses, and corn syrup. First, have the students determine the mass of the egg and record it in the table. They should pour 150 ml of each substance into its own beaker. Add the eggs and record their observations. Students should record the volume of liquid in the beaker as well as the mass of the egg. Finally, have the students use a toothpick to pop the egg membrane and record their observations. Be sure to have paper towels handy as some eggs may squirt!) Allow time for students to write an explanation of their observations using the correct vocabulary. Teacher Info: The egg in plain water and blue water will become slightly larger because water will be blue food coloring in the egg from the blue water since both water from the blue water since both water and food coloring in the egg from the blue water since both water from the blue water since both water and food coloring in the egg from the blue water since both water from the blue water since both water since both water from the blue water since both water since both water from the egg from the blue water since both water since both water from the blue water since both water since inside the egg flow through the membrane into the syrup or molasses. It moves from a higher concentration inside the egg to a lower concentration in the corn syrup. Once again, this is called osmosis. The corn syrup and molasses molecules are too large to pass through the membrane. Observant students will not only notice an increase of volume in the beaker, but they will also see a thin layer of water resting on top of the syrup and molasses. To illustrate the concept of diffusion, add a drop or two of extract (vanilla, bubble gum, lemon, or cinnamon) into a deflated balloon. Blow up the balloon, tie it off, and place inside a shoe box. To make sure the lid stays on the box, use masking tape to secure it. During class, ask students to life one end of the shoe box lid and smell the contents. Their eyes should remain closed when they do this. Ask each students to life one end of the shoe box lid and smell the contents to write an explanation (using the correct vocabulary) of why the box smells like the scent when it was only put inside of the balloon. Teacher Info: The shoe box smelled of the scent even though it was only placed on the inside of the balloon. Teacher Info: The shoe box smelled of the balloon due to the process of diffusion. Every balloon has microscopic holes in its surface. The vapors were able to pass through the membrane from an area of high concentration to an area of low concentration. However, the liquid scent molecules were too large to pass through the membrane. Another way to illustrate osmosis and diffusion is using a tea bag and some water. During class, place a tea bag in a beaker of warm water. Allow time for students to record their observations. Challenge them to write an explanation using the correct vocabulary. Teacher Info: Water flows by osmosis into the tea bag from the beaker and squeeze it to see the water come out. The tea leaves diffuse through the tea bag and into the water; this changes both the color and flavor of the water in the beaker. Student Worksheet: Osmosis & Diffusion (html) | Back to top | Human Body Activities (T. Tomm, Havana, IL) Targeted Concepts: Living things, organization (cells, tissues, organization (cells, tissues, organs, organization) used during my Health unit for 7th & 8th graders. I no longer teach Health, but thought that the lessons would be useful to those of you who do. Skeletal & Muscular System Crossword puzzle (pdf) Human Body systems. Human Body System Challenge (pdf) - A challenging word search puzzle - the students must find 31 terms and then classify them into the various body systems. This download provides project guidelines, student information, and project worksheets. Links for students can be found on the Kid Zone Archive document. Digital Version Available - Check the last slide for teacher information! Human Body Quest (pdf) - This project challenges students to work in teams to create a PowerPoint presentation related to one of the human body systems. The download provides student instructions, A+ grade checklist, presentation planner (draft), and checklist pages for each body system assigned for this project. This project was developed by Lauren Range, Robyn Smith, and Tracy (Trimpe) Tomm. Thanks to Deb Costolnick for sharing the worksheets and rubrics she uses for her version of the Human Body Quest project. This project description, power point rubric, and the presentation rubric. The power point rubric includes a category for the use of technology. One of the goals of this project was to introduce students to grade each other and averaged the scores for their collaboration. grade. | Back to top |

