



2017 STEM FAIR SPONSORED BY



2017
LOWER SCHOOL STEM FAIR
3 BIOLOGICAL SYSTEMS

BIG GYM

» PRIOR KNOWLEDGE: ENERGY AND SIMPLE MACHINES

Experiment: Floating Ping Pong Ball – Use a ping pong ball and a blow dryer to review what we already know about Energy, Force, Pressure and Work.

(HINT: 2015/16 STEM FAIR)

Experiment: Make a Pulley! Use 2 chairs, a basket and a jump rope to make a pulley!

Review what we already know about: Energy, Force, Pressure and Work.

(HINT: 2013/14 STEM FAIR)

Self-Check: Do the Fill-In and check your knowledge before moving on....

» CENTRAL NERVOUS SYSTEM

Experiment: Watch and Make a Brain Cap, watch the short video clip and then use the swim cap and sharpie to make your own brain cap! How Cerebral?!

CEREBRUM

Experiment: Posterior – Read and Try Optical Illusions and THEN use the Prism Goggles and bean bags and see how your eyes can trick your brain...

Self-Check: Do the Fill-In and check your knowledge before moving on....

Experiment: Knee Jerk – Watch and Have a Knee Jerk Reaction! Watch the short video clip and then use the medical hammer to test your Monosynaptic reflexes – think about Voluntary and Involuntary movemtns!

Self-Check: Do the Fill-In and check your knowledge before moving on....

CORPUS CALLOSUM

Experiment: Crossing the Midline – Doing three simple physical activities you can watch your Corpus Callosum at work! Then test your Corpus Callosum further and read the COLOR poster (if you can!)

Self-Check: Do the Fill-In and check your knowledge before moving on....

CEREBELLUM

Experiment: Test Your Balance – Doing simple physical activities you can watch your Cerebellum at work!

Self-Check: Do the Fill-In and check your knowledge before moving on....

LOOK FOR THE BRAIN ACTIVITIES TO REVIEW THESE THREE IMPORTANT PARTS BEFORE MOVING TO THE NEXT BIOLOGICAL SYSTEM

» CIRCULATORY SYSTEM

Experiment: Arteries, Capillaries and Veins: Read and try – Use the cups and straws to discover the importance of healthy arteries and learn about how your blood flows.

Experiment: Look at your Heart and Color – Use the red and blue pencils and color your heart; notice, how and where oxygenated and deoxygenated blood flows through your body.

Experiment: Your Heart and Pulse – Watch and try – Learn how to take your pulse and track your heart rate – watch how those are effected when you perform a myriad of different physical activities...

Self-Check: Do the Fill-In and check your knowledge before moving on....

Experiment: Your Heart as a Double Pump – Use the materials on the table and make a double pump that mimics our hearts – notice the job of valves, too.

Self-Check: Do the Fill-In and check your knowledge before moving on....

Experiment: Make Blood: Read and Try – Fill in the blanks and make BLOOD while you do! Make sure you close your jar tight before taking it home with you!

» SKELETAL MUSCLE SYSTEM

Read and Test Your Knowledge! See if you can connect ALL THREE SYSTEMS while you are exploring the different types of muscles!

Experiment: Scoopin’ Bone Marrow – Use the magnifying glass, spoon and bone (THANK YOU TIBOR’S) and scoop out the bone marrow – do you know what that is?

Self-Check: Do the Fill-Ins and check your knowledge before moving on....

PLAY: Use the bone diagram to help you play BODYO – pick a board and a caller and test your knowledge about Muscles and Bones in your bodies....

Experiment: Musculoskeletal Movements: Joints, Ligament and Tendons – With the help of a Morah make your OWN MOVEABLE hand and make sure you explain how it works!

» IVRIT AND HALACHA

Try and Test: check your knowledge is of common Hebrew Idioms – our students used vocabulary from our STEM learning to further enhance their Ivrit acquisition – just look at the nuances of language they’ve picked up! Students also studied the Halachot (laws) and importance of saving a person’s life on Shabbat and the halachot about staying healthy and taking care of one’s body.

» JEOPARDY

The Answer Is: Stop by and play a game of Jeopardy and test your knowledge to see how much you learned while enjoying this year’s STEM fair!

LITTLE GYM

» ART

This year our Art curriculum has complemented the learning in our classrooms in the most meaningful of ways. In supplement and complement to our STEM learning students from grades 1-5 were able to connect what they have been learning about our biological systems with each of their own unique artistic voices. Please walk around, notice and appreciate how we are able to connect the concrete with the abstract!

GRADES 1 & 2

Using nails, string and wood created plaques of string art that mimic the flow of our circulatory system.

GRADE 3

Utilizing a plethora of materials students were able to create ‘Pop Art’ versions of any system they chose.

GRADE 4-5

Using their working knowledge of the Skeletal Muscle system students made marionettes that mimic the movement of our own human body.

» ZIONISM / ISRAEL

In further enhancement of our integrated learning the fifth graders studied 5 important Israeli inventions in the areas of science and medicine. Students then created “interviews” where they asked each scientist questions and allowed for explanations of each item and how it has furthered and impacted the global world of science and medicine. These “interview” segments are available for you to watch and enjoy – * please note *, to further integrate Ivrit (Hebrew Language) into our STEM learning, the students conducted the interviews in Hebrew and provided English translations – be amazed, proud and most of all enjoy!