

Distance Learning Programs 2011-2012
Teacher Guides and Program Materials available at our website,
www.cmnh.org/site/DL.aspx

All program content is written for a one-hour connection; please inform our Scheduler if your class times are shorter so we may adjust our presentation.

SCIENCE ACADEMIC CONTENT

BALTO: A History of Humans, Huskies, and Health In Alaska

All Ages*

Note: A materials kit will be sent to your school for use during this program. Please schedule at least 2 weeks in advance to allow shipping time.

Bring the amazing achievements of mushers and their sled dogs into your classroom! We'll present the history of "Balto" and the heroic dogs and mushers of the 1925 Alaskan Serum Run, and compare their experience to the Iditarod of today. Discuss diphtheria with a health educator, and find out why the outbreak in Nome, Alaska is so famous. Investigate equipment used to allow humans and huskies to survive in harsh Arctic conditions. Learn the Cleveland, Ohio connection to this famous story, as we detail how people of this area rallied to the aid of Balto and his teammates after they were abandoned and mistreated. After living for several years in "retirement" at the Cleveland Zoo (then called the Brookside Zoo), Balto died on March 14, 1933 and the husky's body was mounted and is now housed at The Cleveland Museum of Natural History.

*For fans of sled dogs and their amazing accomplishments, this program may appeal to all ages. For a teacher's perspective, please refer to our full Teacher's Guide of this program on our website to see how this program can enhance your particular class curriculum.

States of Matter: A Solid Lesson Where Liquids Can Be a Gas

Grades: K-3

Note: A materials kit will be sent to your school for use during this program. Please schedule at least 2 weeks in advance to allow shipping time.

Students explore solids, liquid and gases through hands-on activities and demonstrations. Teachers will need to bring the following items on the day of the program: bucket, big bowl, or other water-catching device; water in a separate bowl or pitcher; several ice cubes; paper towels to contain spills; 6-8 pennies.

Grade K: Scl: 1, 3, 4, 5, 7; ScWK: 1

Grade 1: Phys: 2, 3; Scl: 1, 3, 4, 5, 6, 8

Grade 2: Scl: 2, 4, 5, 6, 7, 9, 10; ScWK: 4

Grade 3: Scl: 4, 5, 6; ScWK: 2

Just Senseless!

Grades: K-2

Note: A materials kit will be sent to your school for use during this program, along with a pre-paid UPS return label. Please schedule at least 2 weeks in advance to allow shipping time.

Let's find out what the five senses do by imagining life without these senses. Using hands-on props and demonstrations, we explore how life would be different if one or more of our senses were disabled. We also discuss how senses help to keep our bodies safe.

K: Scl: 1, 2, 4

Grade 1: L: 1, 3; Scl 9

Grade 2: L: 1; Scl 2, 3

Grades pre-K-2: H: 1.2.1, 4.2.2

Keep on Smiling

Grades: K-2

Investigate the structure, function and proper cleaning of your teeth. Compare your teeth to those of animal specimens from our Museum. Discuss what a cavity is, what causes tooth decay, and your best tooth care techniques!

Grade 1: L: 3

Grade 2: Scl 1

Grades pre-K-2: H: 1.2.1, 1.2.5, 3.2.1, 6.2.1, 7.2.1

Ohio's Native Wildlife

Grades: 2-6

Note: A materials kit will be sent to your school for use during this program, along with a pre-paid UPS return label. Please schedule at least 2 weeks in advance to allow shipping time.

Explore a variety of animals and their role in the eastern North American forest ecosystem. Live animals will be showcased along with video of some of the larger animals in our Perkins Wildlife Center.

Grade 3: L: 2, 3

Grade 5: L: 3, 4, 5

Bug Off, Bugs!

Grades: 3-6

"Ticks and mosquitoes and fleas—Oh My!" Explore the intricate relationships among microbes, insects, animals, humans and their habitats. Learn about life cycles of insects and how some species contribute to the spread of diseases, such as Lyme disease and West Nile virus. Discover ways to protect yourself outdoors from the tiny creatures that consider you lunch!

Grade 3: L: 1, 2, 6;

Grade 6: L: 8; Scl: 1, 3, 4

Grades 3-5: H: 1.5.3, 1.5.4, 2.5.4, 7.5.1

Grades 6-8: H: 1.8.3, 1.8.6, 1.8.8, 2.8.4, 2.8.10

Forces & Motion: Accelerate Your Mass of Students

Grades: 3-5

Note: A materials kit will be sent to your school for use during this program. Please schedule at least 2 weeks in advance to allow shipping time.

Explore Newton's laws of motion and investigate the meaning of velocity, friction, inertia, gravity and much more. This interactive adventure challenges your students to become our Virtual Crash Test Team...make sure you've got room to move!

Grade 3: Phys: 3, 4; Scl: 1, 2, 4, 5, 6; ScWK: 2

Grade 4: Scl: 1, 3, 4; ScWK: 2, 3, 4

Grade 5: Scl: 1, 2, 3, 4, 6

Food Chains, Habitats and Us

Grades: 4-6

As humans continue to encroach on the Earth's unique habitats, it is increasingly important for students to understand how people affect the environment in which they live. While observing specimens from our Wildlife Division and conducting demonstrations in your classroom, students will identify their crucial role in protecting natural diversity.

Grade 4: L: 5

Grade 5: L: 1, 2, 3, 4, 5, 6; S&T: 1

Grade 6: L: 8

Inner Factory: Your Cells At Work

Grades: 4-6

Note: Teachers need to provide either a paper plate or a piece of construction paper for each student to use during this program.

Mighty and microscopic, our tiniest living components are amazingly complex. Compare different kinds of cells: How are eukaryotes, prokaryotes, plant, and animal cells all so similar, yet allow the diversity of life on Earth? Define the functions of organelles and use human Museum specimens to discover how individual cells combine forces to create the complex of trillions that is YOU.

Grade 6: L: 1, 2, 3

Prehistoric People: Who's Our Daddy?

Grades: 4-10

Note: A materials kit will be sent to your school for use during this program, along with a pre-paid UPS return label. Please schedule at least 2 weeks in advance to allow shipping time.

Investigate the most current ideas of human evolution with specialists in the field. Trace the development of modern humans using information from fossil hominids as well as clues from living primates. Specimens from the Hamman-Todd Osteological Collection, one of the largest research collections of modern human skeletons in the world, are used to illustrate unique human physiological traits.

Grade 8: L: 4, 5

Grade 10: L: 22, 23, 24

Body Blueprints: Genetics and Heredity

Grades: 5-8

Investigate the basics of DNA and discover how genes you inherited from your parents determine much of who you are. Look at a model of a double helix to see how genetic information is organized. Experiment with some of your body's own inherited traits and discover some specific dominant or recessive traits your classmates may share.

Grade 6: L: 4, 5, 6, 7

Grade 8: L: 1, 2

Grades 6-8: H: 1.8.4

Climate Change: Investigating Our Impact

Grades 6-12

There's no debate during this program! Heat up your classroom as we challenge your students to explore the connection between several simple scientific principles and the changes in temperature and weather that scientists refer to as "global climate change". During this interactive investigation we will experiment with the phenomenon of the "greenhouse effect", directly observe the relationship between visible and infrared light, illustrate several techniques used to gather climate data from the past, and detail how it is used to predict future changes.

Grade 6: Understanding Technology: 1,2

Grade 7: Earth Systems: 1,2,3,4; Understanding Technology: 1,2,3

Grade 9: Historical Perspectives and Scientific Revolutions: 8; Understanding Technology: 1

Grade 10: Earth Systems: 5,6 -- Historical Perspectives and Scientific Revolutions: 7; Diversity and Interdependence of Life: 16, 17, 18, 19

Grade 11: Earth Systems: 7,8,9,10, 11, 12, 13, 14 -- Historical Perspectives and Scientific Revolutions: 15, 16; Diversity and Interdependence of Life: 7, 8, 9, 11; Understanding Technology: 1,2,5,6

Grade 12: Earth Systems: 5, 6; 12: Understanding Technology: 1,4

Genetic Revolution: Applications of Biotechnology

Grades: 7-12

Genetic engineering? DNA testing? GMOs? Stem cells? Review current applications of DNA research and find out how biotechnology may affect your life. Team up to analyze DNA evidence from a crime scene. Discuss case studies involving genetic information and how this knowledge influences ethical decisions.

Grade 7: L: 8

Grade 8: L: 2, 3

Grade 10: L: 1, 5, 6, 7, 27, 28

Grade 12: L: 1, 5, 6

Grades 6-8: H: 1.8.4, 2.8.6

Grades 9-12: H: 1.12.4, 2.12.6

Disease Detectives

Grades: 7-12

"This just in...nearly half of the students at East Coliville High School are sick with similar symptoms." As part of our Virtual Health Department Epidemiology Team, you will work together to eliminate false leads and piece together clues to determine the cause of this outbreak. It is up to your team to interpret data, identify the pathogen, locate its source and stop its spread before this illness claims more victims.

Grade 7: Scl: 1, 3, 5, 7

Grade 8: Scl: 2, 3, 4

Grade 9: Scl: 1, 4, 6

Grade 10: L: 27, 28; Scl: 4

Grade 11: Scl: 2, 3, 4, 5

Grade 12: L: 12; Scl: 1, 2, 5

Grades 6-8: H: 1.8.3, 2.8.6, 2.8.10

Grades 9-12: H: 1.12.3, 2.12.6, 2.12.10

HEALTH EDUCATION CONTENT

Bodyworks: The Basics of Human Anatomy

Grades: 4-6

Explore concepts in human structure and function, from cells to organs to organ systems. Uncover the basic levels of organization, and locations, structures and functions of major organ systems. View actual human specimens and anatomical models to learn how organ systems work together to support human life and how your behavior influences your body's health.

Grade 6: L: 1, 2

Grades 3-5: H: 1.5.1

Grades 6-8: H: 1.8.1

You Are What You Eat

Grades: 1-3 & 4-6

How do different foods affect how you feel and function? What's the story behind all these food groups, labels, and serving sizes? Work your way through the process of digestion and identify the nutrients each type of food contains. Create healthy meals based on the new "ChooseMyPlate" guidelines and dig into the mystery of calorie content. Programs with older students investigate the information on nutrition labels, and some of the diet-related health issues humans may face.

Grade 1: L: 1, 2; Scl 1, 2

Grade 2: L: 1, 5; Scl 1, 5, 6, 7

Grade 5: L: 2

Grade 6: Scl: 1, 3, 6

Grades preK-2: H: 7.2.1

Grades 3-5: H: 3.5.1, 5.5.3, 5.5.5, 7.5.2

Grades 6-8: H: 2.8.10, 3.8.1, 5.8.4, 5.8.6, 7.8.2

What's NOT In a Cigarette? (30-minute program)

Grades: 6-10

Drugs that are sold in our pharmacies have lengthy labeling that details not only the active ingredients of the product, but also possible interactions between those ingredients and other drugs the purchaser might be using. Why are the labels on tobacco products so vague? What kinds of additives are in cigarettes, chewing tobacco, snuff, and other similar nicotine-containing materials? Using a game-show style format, students will critique advertisements for tobacco and analyze techniques used by media to influence attitudes about tobacco use.

Grades 6-8: National Health Education Standards: 1.8.1, 1.8.7, 1.8.8, 1.8.9, 2.8.3, 2.8.8, 3.8.2, 4.8.1, 4.8.2, 5.8.2, 5.8.6, 7.8.1

Grades 9-12: National Health Education Standards: 1.12.1, 1.12.5, 1.12.9, 2.12.3, 2.12.8, 3.12.2, 4.12.1, 4.12.2, 5.12.2, 5.12.6, 7.12.1

Drugs 301: Why Would We Choose to Use?

Grades: 7-10

Discover the real cost of substance use and abuse to the health of your body and society. Discuss the science of addiction to understand how illicit drugs can be so dangerous. Critique glamorous advertisements for tobacco and alcohol and see how the media influences our attitudes about drug use. Learn to make healthy personal choices for a drug-free lifestyle.

Grades 6-8: H: 1.8.1, 1.8.7, 1.8.8, 1.8.9, 2.8.3, 2.8.8, 3.8.2, 4.8.1, 4.8.2, 5.8.2, 5.8.6, 7.8.1

Grades 9-12: H: 1.12.1, 1.12.5, 1.12.9, 2.12.3, 2.12.8, 3.12.2, 4.12.1, 4.12.2, 5.12.2, 5.12.6, 7.12.1

Macronutrients: Fads vs. Fitness

Grades: 7-12

Learn the basics of proper fueling and hydration for a healthy daily routine. Find out about carbohydrates, proteins and fats as you calculate your macronutrient needs. Use this information to be an informed consumer and work your way through the marketing hype to uncover the facts about fad diets, supplements, energy drinks and fitness regimes.

Grade 7: Scl: 1

Grade 8: ScWK 2

Grade 10: L: 11

Grade 11: L: 2; ScWK 5

Grade 12: L: 4, 9; ScWK: 2

Grades 6-8: H: 1.8.3, 2.8.6, 2.8.10

Grades 9-12: H: 1.12.3, 2.12.6, 2.12.10

Grades 6-8: H: 1.8.1, 1.8.8, 2.8.2, 2.8.5, 2.8.7, 2.8.8, 2.8.10, 3.8.1, 6.8.1

Grades 9-12: H: 1.12.1, 1.12.8, 2.12.5, 2.12.7, 2.12.8, 2.12.10, 3.12.1, 6.12.1

Growing Up and Liking It: Pondering Puberty

Grades: 4-6

Learn why bodies change and what to expect on the road to young adulthood through this presentation.

Engage in an interactive discussion with a health educator on the chemical and physical changes that occur in the human body during puberty. With the aid of fun demonstrations, large format images, models, and specimens, you will discuss human reproductive anatomy, menstruation, nocturnal emissions and other issues.

Grade 6: L: 4, 5, 6, 7; Scl: 3, 4

Grades 3-5: H: 2.5.2, 4.5.4

Grades 6-8: H: 2.8.2, 2.8.7, 4.8.4

Wonder of New Life: Human Fetal Development

Grades: 4-8

Journey inside the uterus and see how pregnancy begins, and follow the development of the embryo through the fetal stage. Discuss physical changes in the mother's body as she goes through her pregnancy, and how the processes of sexual reproduction, menstruation and breastfeeding are natural, healthy aspects of human life. Learn about the process of labor and delivery and view a video of an actual birth.

Grade 6: L: 4, 6, 7

Grade 8: L: 2

Grades 3-5: H: 1.5.4

Grades 6-8: H: 1.8.6, 1.8.8

Girls 2 Women – Girls Only, Please

Grades: 6-9

Girls only please...discuss issues of women's health with a female health educator. Topics include human reproductive anatomy, PMS, menstruation, pad and tampon use, breast self-exam, personal hygiene, toxic shock syndrome and other female health issues.

Grade 6: L: 6, 7; Scl: 3, 4

Grade 7: Scl: 6

Grades 6-8: H: 1.8.1, 1.8.5, 1.8.7, 1.8.8, 3.8.1, 7.8.2

Grades 9-12: H: 1.12.1, 1.12.7, 1.12.8, 3.12.1

Locker Room – Guys Only, Please

Grades 6-9

Get straight talk on men's health for boys led by a male health educator. Topics include male reproductive anatomy, testicular self-exam, prostate health, personal hygiene, stress and anger management, and other male health issues.

Grade 6: L: 6, 7; Scl: 3, 4

Grade 7: Scl: 6

Grades 6-8: H: 1.8.1, 1.8.5, 1.8.7, 1.8.8, 3.8.1, 4.8.3, 7.8.2

Grades 9-12: H: 1.12.1, 1.12.7, 1.12.8, 3.12.1, 4.12.3

Baby, Let Me Tell You About That Baby

Grades: 7-12

Learn about the increased health risks to teen mothers and their children and possible complications of pregnancy. Discuss the specific physical, emotional, and psychological difficulties teen parents face in raising their children. If the teachers would like their students to view a short video of a live birth, this option is available at the end of our presentation.

Grade 7: L: 4

Grade 11: L: 3, 4

Grades 6-8: H: 1.8.1, 1.8.5, 1.8.7, 2.8.3, 2.8.7, 2.8.9, 3.8.4, 3.8.5

Grades 9-12: H: 1.12.1, 1.12.7, 2.12.7, 2.12.9, 3.12.4, 3.12.5

Stress Down – Handle It!

Grades: 7-12

Know why and how your body reacts to stressful situations and learn techniques to manage your stress response. Distinguish between what you can and cannot control and use that information to bring down the stress in your life.

Grade 8: L:3

Grade 11: L:1

Grades 6-8: H: 1.8.1, 1.8.2, 1.8.3, 2.8.7, 2.8.8, 2.8.9, 5.8.4, 5.8.6, 6.8.1, 6.8.3, 7.8.2

Grades 9-12: H: 1.12.1, 1.12.2, 2.12.2, 2.12.7, 2.12.8, 2.12.9, 3.12.1, 6.12.1, 7.12.3

Caught in the Web: An Overview of Sexually Transmitted Infections

Grades: 7-12

View clinical images of common sexually transmitted diseases and discuss their symptoms and methods of transmission. Explore how the web of person-to-person contacts can quickly spread an infectious disease within a community and put all sexually active people at risk. Learn the common treatments for these diseases and methods used to lower the risk of becoming infected.

Grade 7: L: 2

Grade 10: L: 1

Grade 11: L: 1, 3

Grade 12: L:1

Grades 6-8: H: 1.8.1, 1.8.7, 1.8.9, 3.8.2, 3.8.4, 4.8.2, 4.8.4, 5.8.2, 5.8.6, 7.8.1

Grades 9-12: H: 1.12.5, 1.12.7, 3.12.2, 4.12.1, 4.12.2, 5.12.2, 5.12.6

HIV/AIDS: Introduction to the Epidemic

Grades: 7-12

Get informed about HIV and how it ravages the immune system and causes AIDS. Learn about behaviors that put a person at risk for HIV infection and modes of transmission. Discuss ways you can protect yourself from this global epidemic.

Grade 7: L: 2

Grade 8: L 3

Grade 10: L: 7, 21, 23, 24, 26, 27, 28

Grade 11: L: 1, 3, 9

Grades 6-8: H: 1.8.1, 1.8.7, 1.8.9, 2.8.8, 3.8.2, 3.8.4, 4.8.2, 4.8.4, 5.8.2, 5.8.6, 7.8.1

Grades 9-12: H: 1.12.5, 1.12.7, 2.12.8, 3.12.2, 4.12.1, 4.12.2, 5.12.2, 5.12.6, 7.12.1

SOCIAL STUDIES ACADEMIC CONTENT

Ohio Indians

Grades: 3-5

Note: A materials kit will be sent to your school for use during this program, along with a pre-paid UPS return label. Please schedule at least 2 weeks in advance to allow shipping time.

Discover the 12,000-year history of Indians in Ohio. Investigate artifacts from the Paleo-Indians to historic tribes, including the various Mound builders of the Woodland tradition.

Ask questions of our Science Instructors who work daily in the Museum exhibit halls, and let the history of our country's first inhabitants come to life in your classroom.

Grade 4: People- 1a & b, 2; History : 2; Geography: 8

The Human RACE: One Species, Many Opinions

Grades: 7-12

Throughout history, variation within the human species has been a source of community strength and personal identity. It has also been the basis for discrimination and oppression. Today, geneticists and anthropologists are proving that all humans share ancestry in Africa. In the light of these scientific breakthroughs, discuss with our Education team the idea that "[Racism] is not about how you look, it is about how people assign meaning to how you look." (Robin G.D. Kelley, Historian) Students will be asked to participate in activities and discuss ideas that may challenge how they think about race and human variation.

Grade 6-8: Science: Life-B, Scl-B, ScWK-B

Social Studies: Hist-B, People-B, Geog-D

Grade 9-10: Science: Life-C, E, H, J; ScWK-A, B, C

Social Studies: Hist-F; People-A, B

Grade 11-12: Science: Life-C, D, E; S&T-A; ScWK-B, C

Social Studies: People-A, B, C; Citz-A

Experts in the Field: Virtual Connections to Real Scientists

Are your students studying standards that have you stumped for substance? Could you cultivate some kicking content with Curatorial Collaboration? Then consider a Videoconference Connection with The Cleveland Museum of Natural History and let your class ask questions of a Real Scientist! This series of 40-minute Q & A sessions with our Collections and Research staff will allow you access to the inside scoop on science today. Cost: \$120, 40-minute program.

Scheduled as experts' time permits; we recommend you call with a month's notice for us to arrange the program.

[2011-12 Selection of Scientists \(see website for full details\):](#)

Dr. Michael Ryan, Coordinator of Research and Curator and Head of Vertebrate Paleontology

- David Chapman, Casting Technician, CMNH Vertebrate Paleontology Casting Lab

Dr. Andy Jones, Curator and Head of Ornithology

Dr. David Saja, Curator and Head of Mineralogy

Dr. Joe Hannibal, Curator of Invertebrate Paleontology

Ann DuFresne, Associate Curator of Archaeology

- Mark Kollecker, Youth Programs Coordinator, Science Instructor, Archaeologist and Flint-Knapper

Dr. Linda Spurlock, Director of Human Health

- Dr. Jeff Day, Junior Medical Camp Coordinator and Health Educator

2011-2012 JMC® DL Dissection on Demand

“Biology is Boring?” Not anymore! Experience the “wow-factor” of dissection LIVE through CMNH Distance Learning. Created through our Junior Medical Camp @ summer program, each of these engaging experiences are led by a health expert, encouraging students to learn anatomy and physiology while emphasizing their significance to human health and lifestyle choices. While watching the dissection take place, students are challenged with hands-on activities, are allowed many opportunities for questions, and surprised with pop-quiz action to test their critical thinking skills.

NOTE: Students may also attend these programs as guided dissections, if your school is able to procure the organs and dissection tools necessary. We order many of our specimens from Carolina Biological (<http://www.carolina.com/>). Please inform our Scheduler if you would like this option when you register for the program.

JMC® DL Dissection on Demand: Heart

Grades 5-12

Description

The heart keeps the entire body nourished with oxygen and nutrients, but how much do you really know about this vital organ? Heart disease is the number one cause of mortality in the United States! This program will stress the importance of the cardiovascular system, while highlighting ways to keep it healthy. Interactive activities include physical exam skills such as finding your pulse, testing your heart rate, and identifying veins & arteries on your own body. This LIVE dissection of a sheep heart will be an engaging way to review cardiac anatomy, function, and possible diseases.

JMC® DL Dissection on Demand: Brain

Grades 6-12

Description

The brain controls everything that our bodies do while interpreting everything that we experience. How does a 3-pound blob of fatty tissue handle all of this action? During this LIVE dissection of a sheep brain, students will learn anatomy of the brain and the functions of their nervous system. Hands-on activities will include trying out doctor’s physical exam skills, illustrating neurophysiology and nervous system health. We’ll discuss some examples of brain evolution in different organisms and strategies to help keep your gray matter in top condition.

JMC® DL Dissection on Demand: Fetal Pig

Grades 6-12

Description

Observe the dissection of a whole animal often used in forensic and medical science due to its close match with human physiology. A museum expert will quiz students on anatomy and organ function throughout the dissection, and point out interesting traits and features students may notice on their own bodies. Common questions about human health and diseases will be answered about each major organ, and preserved human specimens from Museum collections will be used to compare with pig anatomy.

Technical Information

All interactive videoconferencing programs are offered through IP connection (H.323). ISDN and ATM (H.320) calls require a bridge from the requesting organization, or the Museum can set one up for an additional charge. For more details, please visit our website, www.cmnh.org. Test connections are encouraged, especially for first time clients.

Scheduling

Programs are scheduled on demand based on availability. Please call 216-231-8002 or e-mail poverhol@cmnh.org at least two weeks in advance to schedule a program. Please include the following information:

- Date(s) & time(s) requested (*all times in Eastern Time, please*)
- Name of program
- Grade & number of students
- Teacher's name & phone number
- School address (for sending kits)
- Technical contact name & phone number
- Connection information (IP or DID number)
- Test connection date & time
- Billing information
- Additional information to help us understand your needs from the program

Pricing

\$120 per program

Bundle up and save!

\$20 off per program when you schedule 5 or more
(programs do not have to be received all on the same day for this discount).