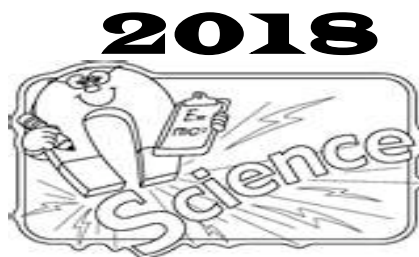


SUMMER SCIENCE CAMP

June 18, 19, 20 Mon., Tues., Wed.
West Holmes High School



What: Science, Technology, Electronics, Engineering, Environment, and Math

Who: Students completing 4th, 5th, 6th, 7th, 8th, or 9th Grade may participate.

Early registration Fri., June 1

CLASSES:

MONDAY, TUESDAY, WEDNESDAY AM 9:00-11:30

(Session # 1 MTW mornings) **Build A Microprocessor Controlled "Melodymaker:" - Electronics (Grades 6-9) (Limit 8)**

(Fee: materials \$15.00) Project Taught and developed by: David Bayer, inventor; and Aaron Rennie, project designer.

In these 3-morning sessions each student will make his/her own handheld miniature melody synthesizer. Learn a little bit about electronics, electricity and soldering.

MONDAY AM 9:00-11:30

(Session # 2M) **Drone Surveying Technology: - Engineering (Grades 6-9) (Limit 10)**

Taught by: Cory Baker, from Holmes Co. Engineer Office and Diversified Engineering Staff of New Philadelphia

This class will demonstrate how a drone is flown, and how it is used for modern surveying technology. A demonstration will be presented to show the procedure to survey a plot of land using a flying drone. Students will learn how aerial targets are placed, and how the drone can recognize an elevation assigned to those aerial targets. Each class member will get a chance to manually fly the drone outside. The drone is controlled with a remote control that is connected to an iPad that shows a first-person perspective of the drone. Students will record videos and take pictures from the iPad while the drone is in flight.

(Session # 3M) **Feed Your Brain: - Math Logic Puzzlement (Grades 4-9)**

Taught by: Thomas B. Gregory, Emeritus Professor Mathematics, OSU Mansfield

Learn through Math Activities for Entertainment, Puzzlement and Enlightenment. Use what you have learned and what you can learn to have fun as you gain insight into the world around you. Challenge your thinking and others with logic puzzles.

MONDAY PM Noon-2:30

(Session # 4M) **Surprising and Amazing Discoveries: - Biology (Grades 4-9) (LIMIT 14)**

(Fee: Materials \$5.00) Taught by: Bonnie Lee Agawa, West Holmes former teacher and Brian Ackert, Danville High School Science teacher

Students will work in small groups. While engaging in a guided dissection of an adult frog, you will discover the similarities and differences to human anatomy. During the supervised dissection of an owl pellet, you will be challenged to determine what the owl had for dinner. Prepare to be amazed!

(Session # 5M) **Fun With Computer Programming: - Computers (Grades 4-9) (Limit 15)** Taught by: Andy Barr, Altair Engineering

In this class you will learn basic computer programming concepts and use them to make your own interactive stories, games, and animations. Students need to bring your own ear buds for this class.

TUESDAY AM 9:00-11:30

(Session # 6T) **Lego We-Do Robotics: - Robotics (Grades 4-9) (Limit 14)** Taught by: Kathy Blackford, Extension Educator, 4-H Youth Development, Ashland County office of OSU Extension

Have fun in this introductory robotics class. We will build several LEGO models featuring working motors and sensors. Program your robots to move, react to the environment and make sounds.

(Session # 7T) **Fidget Spinner STEM Challenge: - Engineering (Grades 4-9) (Limit: 15)** Taught by: Christie McGee, Teacher of Gifted, Muskingum Valley ESC

Students will use the engineering design process to create a fidget spinner from Lego and Technic pieces. Students will, also, create a simulation of a business in which they will calculate labor, material, and packaging costs to produce their fidget and develop a marketing plan to sell their devices.

(Session # 8T) **Make-it-Yourself Bath-Body Products: - Chemistry (Grades 6-9) (Limit: 15)**

(Fee: Materials \$5.00) Taught by: Kate Shumaker, Holmes County Extension Office

DIY Bath and Body! Where's the science? It's all chemistry! Combine acids and bases to make fizzy bath bombs and more. Make your own bath bombs, exfoliating scrubs for your body and lips, facemasks and lotion bars. Keep them for yourself or give them as gifts.

TUESDAY PM Noon-2:30

(Session # 9T)- **Lego NXT Robotics: - Robotics (Grades 4-9) (Limit 14)** Taught by: Kathy Blackford, Kathy Blackford, Extension Educator, 4-H Youth Development, Ashland County office of OSU Extension

Build a robot and use up to four sensors to move it around its environment. You'll learn about the touch, sound, ultrasonic and light sensors while programming your robot to navigate mazes and other challenges in this science technology class.

(Session # 10T) **Two Bees or Not Two Bees: - Biology Ecology (Grades 4-9) (LIMIT 12)**

Taught by: Pat Dutton, Ohio Certified Volunteer Naturalist, Pollinator Specialist

Discover our native bees, their role as pollinators and the variety of colors and sizes of native bees. Learn to distinguish between a bee and bee mimics (those insects that look like a bee). We will also explore the different ways native bees raise their young and how you can help these incredible creatures. Be prepared to go outside to see what bees we can find and the habitats they are visiting. Bee wise and be up on the latest buzz on bees.

WEDNESDAY AM 9:00-11:30

(Session # 11W) **What's Outside Your Back Door? - Environment (Grades 4-9) (Limit 15)** Taught by: Janessa Hill, Holmes Co. Extension Educator, 4-H Youth Development

Come learn what might be right out your back door as we explore the outdoors during this session. Weather permitting we will be outside identifying and learning more about wildlife in Ohio. From skulls, skins, tracks and scat learn how to identify some of Ohio's most popular wildlife and plants and how we as humans co-exist everyday with them! Join us to learn through hands on activities more about what is right outside our back doors.

(Session # 12W) **Water Quality Part 1: - Environment (Grades 4-9) (Limit 15)** Taught by: Brooke Fox, West Holmes Middle School Science **and** Abby Radabaugh, Wise Middle School Science

How does the watershed effect the water quality in Holmes County, or does it? Students will focus on tracing water paths in Holmes County by using maps to trace the entry point and destination of waterways throughout Holmes County. Discuss the sources of pollution to the water supply. Learn about Lake Erie "dead zones."

WEDNESDAY PM Noon-2:30

(Session # 13W) **Wildlife From A Different Perspective: - Environment (Grades 4-9) (Limit 15)** Taught by: Janessa Hill Holmes Co. Extension Educator, 4-H Youth Development

Come learn about Ohio's wildlife and specifically the large mammals. We will be talking about wildlife habitats, trends, management, and human impacts on Ohio's wildlife. We will be taking an un-traditional approach to look at wildlife habitat and wildlife/human conflicts. This will be a hands-on session and outside weather permitting.

(Session # 14W) **Water Quality Part 2: - Environment (Grades 4-9) (Limit 15)**

(Fee: Materials \$20.00) Taught by: Brooke Fox, West Holmes Middle School Science Teacher and Abby Radabaugh, Wise Middle School Science Teacher

Continued from the morning class, learn how to test water quality of samples from various locations.

Students will use information from the am session to evaluate the significance of the test results in the pm session.

Closing Wednesday 2:30-3:30

Pleistocene Era and Fossils- Closing (All students and parents) Taught by: Barry Jacobs, Saber Education Consulting

Learn the highlights of the area in the Pleistocene Age 15,000 years ago and see fossils that represent some of the early inhabitants.

MAIL Registration to: 2018 Summer Science Camp, 263 South Monroe St., Millersburg, Ohio 44654

About the SUMMER SCIENCE CAMP Partners

*In 2010, Holmes County AAUW (American Association of University Women) chapter offered a class on Magnets and Electromagnets. Holmes County 4-H OSU Extension offered youth learning through local 4-H club projects and extension activities and became a partner in 2011. West Holmes Science Club was a partner in 2013. Delta Kappa Gamma (DKG) is an educational society that promotes education. DKG became a sponsoring partner in 2016. DKG (Delta Kappa Gamma) became the coordinating body in 2018 and West Holmes School District became the sponsor. **The mission is to encourage students to participate in Science, Technology, Engineering and Math (STEM) activities.***

Home Reminder Schedule

Circle your choices below and save to post as home reminder.

All-day participants, bring your own lunch.

****Parents provide all transportation and pick-up students at the end of the class each day.**

We are not responsible for students after end of last class of each day.

MON. JUNE 18, 2018 9:00 -11:30	TUES. JUNE 19, 2018 9:00-11:30	WED. JUNE 20, 2018 9:00 - 11:30
Pt.1 Build Microprocessor"Melodymaker" <i>(Gr.6-9)</i>	Pt.2 Build Microprocessor"Melodymaker" <i>(Gr.6-9)</i>	Pt.3 Build Microprocessor"Melodymaker" <i>(Gr.6-9)</i>
Drone Surveying Technology <i>(Gr.6-9)</i>	Lego We-Do Robotics <i>(Gr.4-9)</i>	What's Outside Your Back Door? <i>(Gr.4-9)</i>
Feed Your Brain <i>(Gr. 4-9)</i>	Fidget Spinner STEM Challenge <i>(Gr.4-9)</i>	Water Quality -Part 1 <i>(Gr. 4-9)</i>
	Make-it-Yourself Bath-Body Products <i>(Gr.6-9)</i>	
LUNCH 11:35 sack lunch time/Restroom Break	LUNCH 11:35 sack lunch time/Restroom Break	LUNCH 11:35 sack lunch time/ Restroom Break
MON. JUNE 18, 2018 12:00 - 2:30	TUES. JUNE 19, 2018 12:00 - 2:30	WED. JUNE 20, 2018 12:00 - 2:30
Surprising and Amazing Discoveries <i>(Gr.4-9)</i>	Lego NXT Robotics <i>(Gr. 4-9)</i>	Wildlife From A Different Perspective <i>(Gr.4-9)</i>
Fun With Computers <i>(Gr. 4-9)</i>	Two Bees or Not Two Bees <i>(Gr. 4 -9)</i>	Water Quality Part 2 <i>(Gr. 4-9)</i>
		<i>Closing: 2:30-3:30 Pleistocene Era and Fossils (All students & parents)</i>

REGISTRATION FORM

Summer Science Camp

West Holmes High School

June 18, 19, 20, 2018

Return by Fri., June 1, 2018 early registration \$25 + any added fees. After June 1, registration is \$30 + any fees.

Student Information (Please Print clearly so nametags will have correct spellings.)

Student Name _____ Phone _____ School District _____ Building _____
Grade Completed _____

Parent or Guardian

Father: _____ Mother _____

Father's Address _____ Mother's Address _____

Father's Phone _____ Mother's Phone _____

Circle how you learned of Summer Science Sessions Camp: School flyer/Teacher? School Newsletter? Newspaper? *Daily Record?* *Shopper?* *Bargain Hunter?*
Radio? Electronic Bulletin Board Mbg Square? Rodhe's Bulletin Board? Library? Friend? Parent? What Other? _____

All-day participants, bring your lunch.

CLASS SESSION Preferences: Indicate 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th choice if a class is full. Check-in 15 minutes prior to class.

- + \$15. fee _____ 3 mornings # 1MTWam **Build A Microprocessor Controlled "Melodymaker"** Grades 6-9 9:00 -11:30 AM (Limit 8)
- _____ 1 Session # 2M am **Drone Surveying Technology** Grades 6-9 Monday, 9:00 -11:30 AM (Limit 10)
- _____ 1 Session # 3M am **Feed Your Brain** Grades 4-9 Monday, 9:00 -11:30 AM
- + \$5. fee _____ 1 Session # 4M pm **Surprising and Amazing Discoveries** Grades 4-9 Monday, 12:00 - 2:30 PM Limit 14)
- _____ 1 Session # 5M pm **Fun With Computer Programming** Grades 4-9 Monday, 12:00 - 2:30 PM Limit 15)
- _____ 1 Session # 6T am **Lego We-Do Robotics** Grades 4-9 Tuesday, 9:00 -11:30 AM (Limit 14)
- _____ 1 Session # 7T am **Fidget Spinner STEM Challenge** Grades 4-9 Tuesday, 9:00 -11:30 AM (Limit 15)
- + \$5. fee _____ 1 Session # 8T am **Make-it-Yourself Bath-Body Products** Grades 6-9 Tuesday, 9:00 -11:30 AM (Limit 15)
- _____ 1 Session # 9T pm **Lego NXT Robotics** Grades 4-9 Tuesday 12:00 - 2:30 PM (Limit 14)
- _____ 1 Session # 10T pm **Two Bees or Not Two Bees** Grades 4-9 Tuesday 12:00 - 2:30 PM (Limit 12)
- _____ 1 Session # 11W am **What's Outside Your Back Door?** Grades 4-9 Wednesday, 9:00 -11:30 AM (Limit 15)
- _____ 2pt Session # 12W am **Water Quality-Part 1** Grades 4-9 Wednesday, 9:00 -11:30 AM (Limit 15)
- _____ 1 Session # 13W pm **Wildlife From A Different Perspective** Grades 4-9 Wednesday, 12:00 - 2:30 PM (Limit 15)
- + \$ 20. fee _____ 2pt Session # 14W pm **Water Quality-Part 2** Grades 4-9 Wednesday, 12:00 - 2:30 PM (Limit 15)
- _____ Closing for all pm **Pleistocene Era & Fossils** ALL Students and Parents Wednesday 2:30 - 3:30 PM

TOTAL \$ _____ *Registration + Fees _____ = TOTAL \$ _____

*Return by Fri., June 1, 2018 early registration \$25 + any added fees. After June 1, registration is \$30 + any fees.

EMERGENCY MEDICAL AUTHORIZATION

Summer Science Camp June 2018

PRINT PLEASE

Student Name _____ Student's Home Address _____
Student's date of birth _____ Age _____ Grade just completed _____

*In case of an emergency, we will attempt to contact parents/guardian to authorize medical action for a child who becomes ill or injured during the class activity. If a parent /guardian cannot be reached, provide an alternate emergency contact person and number.

* Primary Emergency Contact Parent/Guardian _____ Phone _____
* Secondary Emergency Contact _____ Cell Phone Number _____ Other phone _____ Relation _____
* Other Emergency Contact _____ Cell Phone Number _____ Other phone _____ Relation _____

MUST BE COMPLETED

Preferred Health Care Provider: Doctor: _____ Contact Phone _____

Preferred Dentist: _____ Contact Phone _____

Medical Specialist: _____ Contact Phone _____ Hospital: _____

Part 1. TO GRANT MEDICAL CONSENT

In the event reasonable attempts to contact me, other parent or guardian have been unsuccessful, I hereby give my consent for (1) any administration of any treatment deemed necessary by the listed doctor, dentist, or medical specialist, or, in the event the designated preferred practitioner is not available, consent for treatment permitted by a licensed physician or dentist, and (2) the transfer of the child to the above hospital or any hospital reasonably accessible.

This authorization does not cover major surgery unless the medical opinions of two other licensed physicians or dentists, concurring in the necessity for such surgery, are obtained prior to the performance of such surgery.

Facts concerning the child's history including allergies, medications being taken, and any physical impairment to which a physician should be alerted are:

PLEASE Needed Signature of Parent/Guardian (X) _____ Date _____

Required

Parent Permission We, the undersigned,

- DO Give permission for our child to participate in the science camp activities.
- DO Understand that neither the course instructor, nor DKG (Delta Kappa Gamma), nor 4-H/OSU Extension, nor staff helping with the events of the day, nor West Holmes School District will be held responsible for any accidents or injuries that may be sustained by my student and
- DO Grant permission of my child's activities for publicity and media purposes.

Please- Required Signature Parent/Guardian (X) _____
Date _____

Part 2. REFUSAL TO CONSENT (Do not complete if you completed Part 1.)

I do not give my consent for emergency medical treatment of my child. In the event of illness or injury requiring emergency treatment, I wish the persons in charge to take the following action

Signature of Parent/Guardian _____ **Date** _____

MAIL FORMS

- Enclosed is my \$ check payable to HOLMES COUNTY DKG BRANCH**
- Mail Completed Registration & Emergency Medical form with check**

**Mail to: 2018 Summer Science Camp,
263 South Monroe St. ,
Millersburg, Ohio 44654**

Withdrawal/Refund: Immediately notify the registration address in writing.
No refund will be made after the Monday, June 18 Program start.

(Questions: Call 330-674-3377)