

2024-2025

UAS/DRONES

RAY SHARP

DATES	DESCRIPTION	DAILY OBJECTIVES
8/19-8/23	Trust the FAA	Introduction, Icebreakers, assign seating, classroom procedures, emergency preparedness, discuss drone history, drone safety, team building and discuss class goals. Students will also earn the FAA Trust Certificate.
8/26-8/30	It's All Under Control	Students will become familiar with drone controllers and how to use them. Drone safety will continued to be discussed and students will demonstrate knowledge of drone safety
9/2-9/6	Net Outcome	9/2/24 No School Monday for Labor Day Working as teams, students will assemble the Indoor Drone Arena, assigned a small drone, and begin freestyle flights inside the arena.
9/9-9/13	Regulators! MOUNT UP!	Using the Drone Pilot Ground School program, students will study various rules and regulations concerning flight and night flight.
9/16-9/20	Understanding Principles of Flight	Students will identify the structure of an aircraft, explaining the forces of flight, and explain the characteristics of roll, pitch, yaw, and lift.
9/23-9/27	Understanding propulsion, power, and types of control	Students will compare types of propulsion, discuss types of batteries, and learn the function of propellers
9/30-10/4	Understanding types of control	Students will fly drones to understand various levels of operator vs. computer control, and classify communication methods

10/7-10/11	Execute pre-and-post flight operations, and learn FAA Part 107 terminology	Students will learn what actions should be taken prior to and after a flight, and students will start using words and definitions found on the FAA Part 107 test
10/14-10/18	Execute in flight operations and FAA Part 107 terminology	Students will re-visit the roles of an UAS flight crew
10/21-10/25	Execute in flight operations and FAA Part 107 terminology	10/25 - PD Day (No Students) Students will learn various stages of flight: take off, flight, return-to-home, and landing
10/28-11/1	Execute appropriate responses to in-flight scenarios	Students will learn how to respond to loss of transmission and loss of visual-line-of-sight
11/4-11/8	Review current regulations and industry applications	Students will review federal, state, and local regulations Students will examine careers related to UAS operations
11/18-11/22	Understanding aeronautical principles	Students will learn classified airspace, read sectional charts, and explore airport procedures
11/25-11/29		Thanksgiving Break
12/2-12/6	Radio communications and emergency procedures	Students will demonstrate proper radio communication and emergency procedures
12/9-12/13	Digital design and manufacturing	Students will learn about digital manufacturing, design a 3-d model, print a 3-d model, and print a UAS drone 3-d component

12/16-12/20	Execute a drone mission	Students will plan, design and execute UAS flight mission
12/23-1/3		Winter Break
1/6 -1/10	Apex Drones	We will assess and possibly re-assign seating Students will assist in the creation of a Drone sign-out sheet. Students will practice flying new Apex Drones.
1/13-1/17	Review basic flight controls	Students will review the parts of a drone and perform basic flight maneuvers using Activity 1 in the Pitsco handbook.
1/20-1/24	Advanced Flight Controls	2/20 President's Day (No School) Students will practice advanced flight controls utilizing Activity 2 found in the Pitsco handbook
1/27-1/31	Soldering	We will discuss soldering safety and review soldering techniques Students will solder to wires together Students will solder wires to circuit board
2/3-2/7	Navigating Obstacles Drone Competition	Students will learn to navigate obstacles utilizing Apex drones and activity labeled, "Navigating Various Obstacles" found in the Pitsco handbook. Students will also participate in a competition.
2/10-2/14	Airspace Classification	Students will learn various FAA Airspace classifications and how it relates to flying drones.
2/17-2/21	No Fly Zone	2/17-MLK Day (No School) Students will fly Apex Drones utilizing activity #4 in the Pitsco handbook labelled, "No Fly Zone".
2/24-2/28	Can we fix it? YES WE CAN!	Students will learn how to perform calibration, maintenance, and repair procedures on various drones.

3/3-3/7	Picture Perfect	Students will learn basic and photography/videography maneuvers utilizing Activity #5 labeled, "Picture Perfect" in the Pitsco Handbook.
3/10-3/14	Going Thermal	Students will learn about thermal imaging and processing, utilizing thermal drones.
3/17-3/21	Drone On A Mission	3/21-PD Day (No Students) Students will learn to use waypoints to fly a pre-determined mission.
3/24-3/28		Spring Break
3/31-4/4	NEACTC Drone Factory	Students will review drone components and assemble a drone. Students will then fly their assembled drones.
4/7-4/11	BVLOS	Students will practice flying drones beyond visual line of sight utilizing activity #6 in the Pitsco handbook labeled, "Beyond Visual Line of Sight". Students will then participate in a competition.
4/14-4/18	Traffic Jam	4/14 - SkillsUSA Arkansas Leadership Conference Hot Springs, AR 4/15 - SkillsUSA Arkansas Leadership Conference Hot Springs, AR 4/16 - SkillsUSA Arkansas Leadership Conference Hot Springs, AR 4/18-Good Friday (No School) Students will practice documenting traffic patterns utilizing Activity #7 labeled, "Traffic Jam" in the Pitsco Handbook.
4/21-4/25	Somebody Check the Breaker!	Students will simulate checking a power grid outage utilizing Activity #8 in the Pitsco Handbook.

4/28-5/2	It's Map Time	Students will learn about surveying and mapping careers and practice mapping utilizing Activity #9 in the Pitsco handbook. Students will participate in a competition.
5/5-5/9	Wildlife	Students will practice getting an account of all wildlife in a designated area with photographs or video utilizing Activity #10 in the Pitsco handbook.
5/12-5/16	Off To The Races	Students will practice racing drones and participate in a competition utilizing Activity #12 in the Pitsco handbook.
5/19-5/23	Disaster Strikes	Students will learn to access the scene of a disaster and identify all the hazards on the scene utilizing Activity #12 in the Pitsco Handbook.
5/26-5/30	Help Is On The Way!	5/26 - Memorial Day (No Students) Students will participate in a disaster simulation competition.