

# Middle School FALL PROGRAM 8/22/22-12/9/22

## Module 1 Lesson 1: Conservation in the West

### Topics (Week of 8/22)

- Public Lands and the Tonto National Forest
- Conservation
- Natural Resource Management
- Riparian Areas: Importance in the Southwest
- Lower Salt River Restoration Project

## Module 1 Lesson 2: How Can Technology Aid in Conservation Efforts

### Topics (Week of 9/5)

- Adaptive Management- Monitoring
- Geographic Information Systems
- GIS/Drones as a Data Collection Tool
- Onsite vs Offsite Observation-Remote Sensing
- GIS and Remote Sensing on the LSRRP

## Module 2 Lesson 1: Utilizing GIS Technology

### Topics (Week of 9/19)

- Geographic Information Systems
- Raster vs Vector Data
- Points, Lines and Polygons
- Data Attributes and Queries
- Ways to Access GIS

## Module 2 Lesson 2: Intro to UAS Technology

### Topics (Week of 10/3)

- What is a UAS?
- Varying UAS Platforms
- Mechanics of flight
- Recreational vs Commercial Use
- Preparing for a Flight

## Module 3 Lesson 1: Intro to Remote Sensing

### Topics (Week of 10/17)

- What is Remote Sensing?
- Uses of Remote Sensing
- Basics of Aerial Imagery
- Characteristics of Imagery
- UAS vs Satellite Imagery

## Module 3 Lesson 2: Utilizing UAS Collected Data

### Topics (Week of 10/31)

- Drone Imagery
- Point Clouds
- Orthomosaics
- Digital Elevation Models
- How are all of these used in LSRRP/Green Drone?



# Middle School SPRING PROGRAM 8/22/22-12/9/22



## Module 1 Lesson 1: Conservation in the West

### Topics (Week of 1/16)

- Public Lands and the Tonto National Forest
- Conservation
- Natural Resource Management
- Riparian Areas: Importance in the Southwest
- Lower Salt River Restoration Project

## Module 1 Lesson 2: How Can Technology Aid in Conservation Efforts

### Topics (Week of 1/30)

- Adaptive Management- Monitoring
- Geographic Information Systems
- GIS/Drones as a Data Collection Tool
- Onsite vs Offsite Observation-Remote Sensing
- GIS and Remote Sensing on the LSRRP

## Module 2 Lesson 1: Utilizing GIS Technology

### Topics (Week of 2/13)

- Geographic Information Systems
- Raster vs Vector Data
- Points, Lines and Polygons
- Data Attributes and Queries
- Ways to Access GIS

## Module 2 Lesson 2: Intro to UAS Technology

### Topics (Week of 2/27)

- What is a UAS?
- Varying UAS Platforms
- Mechanics of flight
- Recreational vs Commercial Use
- Preparing for a Flight

## Module 3 Lesson 1: Intro to Remote Sensing

### Topics (Week of 3/13)

- What is Remote Sensing?
- Uses of Remote Sensing
- Basics of Aerial Imagery
- Characteristics of Imagery
- UAS vs Satellite Imagery

## Module 3 Lesson 2: Utilizing UAS Collected Data

### Topics (Week of 3/27)

- Drone Imagery
- Point Clouds
- Orthomosaics
- Digital Elevation Models
- How are all of these used in LSRRP/Green Drone?

