# Introduction to Precision Agriculture: The Fundamentals

Keywords: precision agriculture, hardware, software, inputs, sensor, meter, monitor, GPS, GIS, remote sensing, technology

## Purpose

Upon completion of this lesson, the students will be able to:

* Classify the differences and relationship between hardware and software
* Understand what inputs can be controlled using precision agriculture
* Describe the fundamental components of precision agriculture technology to be prepared to dive deeper into specific precision agriculture technologies

## Materials Needed

Lesson 2 PowerPoint Presentation

## Vocabulary

Hardware: the mechanical and physical equipment that we use such as planters and harvesters

Software: the computer programming used to control what the hardware does

## Activity Class Time

This lesson could take about 35 minutes. There is an activity at the end that allows students to explore a technology used in the industry. You can expand that longer to encourage everyone to share out about the activity.

## Set-up Before Class

PowerPoint Two

## Classroom Instructions

Utilize the Speaker Notes in the presentation to introduce precision agriculture to your students.

### Introduction Talking Points

Review with them what the definition of precision agriculture is. Ask them to describe it to their neighbor.

### Activity

Have students use their school-assigned technological device or their phone to research how some technologies in agriculture are being utilized. More details about this activity can be found on Slide 27.

### Post-Activity

The recap for today’s lesson is that there are two main components of precision agriculture technology: hardware and software. These components help us control our inputs and will hopefully give us optimal results.

Follow up Questions:

What is the most intriguing thing that you have learned in these last two lessons?

What is a technology that you want to learn more about?

Are any of these technologies something that you can see yourself utilizing in a future career?