

Pest Patrol Field Notes and Constraints

NAME _____

DATE _____

PERIOD _____

Part 1: Read the three field reports

Use *Find Your Future* pp. 93-94. Record only facts that would change the drone design.

AGRICULTURAL ENGINEER REPORT

One or two useful facts:

What the drone must be able to do because of these facts:

FARMER REPORT

One or two useful facts:

What the drone must be able to do because of these facts:

PLANT SCIENTIST REPORT

One or two useful facts:

What the drone must be able to do because of these facts:

CAREER OPPORTUNITY AND WORK PRODUCT

The agricultural engineer uses these reports to create _____

Another worker or team uses that work product to _____

Part 2: Turn evidence into design constraints

A **constraint** is a limit or requirement the design must respect. Write a short, testable statement for each one.

CONSTRAINT 1: WHAT MUST THE DRONE DETECT OR MEASURE?

Evidence from the field reports:

CONSTRAINT 2: HOW MUST THE DRONE MOVE, COVER THE FIELD, OR PROTECT CROPS?

Evidence from the field reports:

CONSTRAINT 3: WHAT LIMIT MUST THE TEAM PLAN FOR?

Think about cost, battery life, weather, safety, accuracy, or farmer time.

Evidence or reasoning:

RANK THE CONSTRAINTS

Most important constraint: _____

Why it comes first:

READY FOR DAY 3

- ☐ I recorded evidence from all three reports and named the engineer's work product.
- ☐ I wrote three testable constraints.
- ☐ Each constraint has evidence or reasoning beside it.
- ☐ I ranked one constraint and explained the choice.