# Lesson 3.1 – From Curiosity to Research: Asking an Environmental Question

Quarter 3 · Research & Investigation · Week 21

Name: _____ Partner: _____ Date: _____ Period: _____

**Big Question:** What environmental question about our garden, our city, or our food do we most want to answer, and can we answer it with an experiment in six weeks?

**Word Bank:** researchable question · feasibility · multi-level design · dose-response · environmental stressor · ethics · pilot study · scope

## My Task

Screen your questions.

| Question | Measurable? | Feasible in 6 weeks? | Safe and ethical? | APES link |
|---|---|---|---|---|
| Question 1 | | | | |
| Question 2 | | | | |
| Question 3 | | | | |
| Team's final question | | | | |

| | |
|---|---|
| **Support:** Provide a question-builder frame: "How does ___ (levels) affect ___ (measure) of ___ (organism)?" | **AP Challenge:** Identify a possible threshold or optimum in your question and predict the shape of the curve. |

## Think & Respond

1. Levels of our independent variable:

2. Why this question matters for Phoenix:

**AP EXAM PRACTICE**

(MCQ) Which research question is most appropriate for a six-week investigation in a school garden? (A) How does climate change affect all plants? (B) How do NaCl concentrations of 0, 2, 4, 6, and 8 g/L in irrigation water affect radish germination rate and root mass? (C) Is pollution bad? (D) Why are deserts dry?

**EXIT TICKET**

1. Write your team's research question.

2. List the levels of your independent variable.

3. Explain why this question matters for Phoenix.