

The STEPS are...



**1. State the
purpose/problem
or question...**

Ask why.

**What do you want
to find out?**



2. Gather
background
information
... Research,
learn



3. Form a hypothesis... a testable, possible explanation.

What do you think will happen?

If...then...statement

4. Test hypothesis....

perform an experiment, make observations, or make a model.

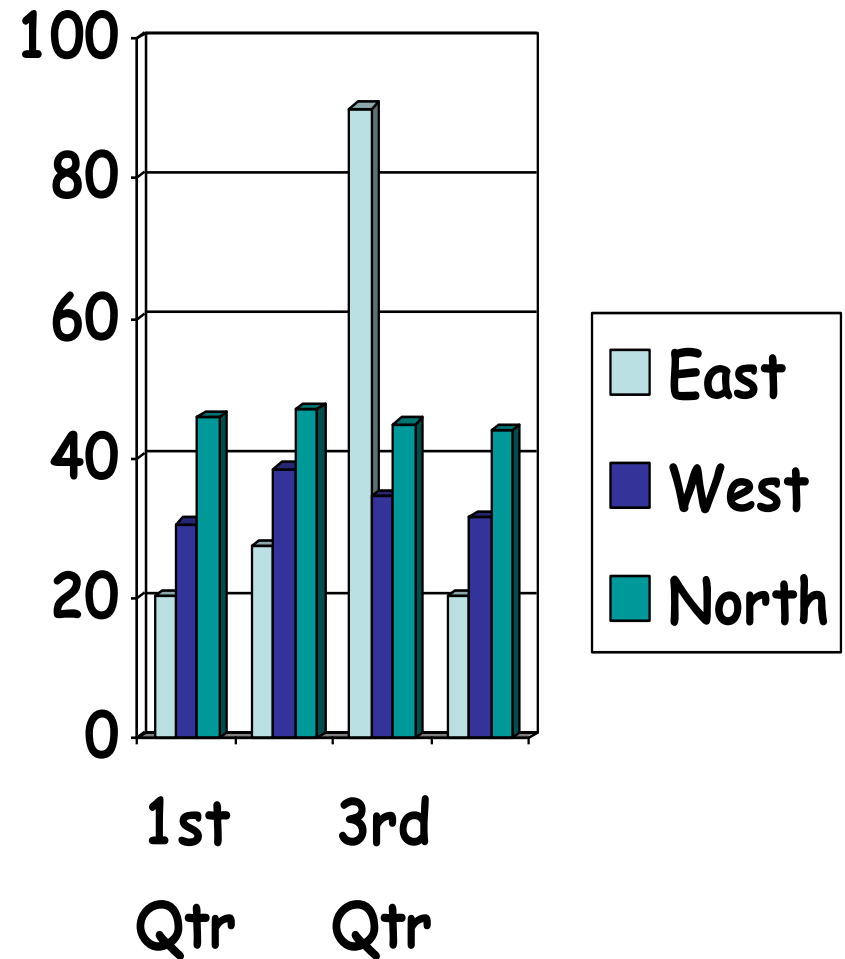
Make a specific list of what will be done.



5. Analyze data – make tables, graphs, etc.

What
happened?
What did you
see, hear, or
smell?

State your
observations





6. Draw a conclusion –what do the results mean?

Was your hypothesis correct or incorrect?

Correct or incorrect?

Part B: Terms to Know

A stylized illustration of a man in a suit pointing with a pen at a line graph on a grid. The graph shows a line that starts at the bottom left, rises to a peak, dips slightly, and then rises again to a higher peak. The man is looking at the graph with a thoughtful expression.

- **Independent variable** – determined and manipulated [changed] in the experiment
- **Dependent variable** – changes in response to the independent variable
- **Constant** – a variable that does not change when other variables change
- **Control** – a standard used for comparison

THEORY vs. LAW

- **Scientific theory – explanation based on knowledge gained.**

- **Scientific law – statement about what happens in nature that always seems to be true**

