

# Two Huge Differences from traditional textbooks:

We focus on a framework of ideas that can organize all knowledge.

Hands-on activities deal with reality. Students use a full range of skills to gather and process information.

## Investigation: Commerce

Structure is important because it organizes information and helps us deal with complexity. If a store put its products on shelves in random order, finding something you want would be almost impossible. Quite naturally, similar products are grouped together

The same principle applies to information. Random facts are extremely hard to remember, but if we can organize them into some kind of structure, remembering and using them is much easier. .

- Step 1 ***Make a tree for the way products are organized in a typical supermarket.***
- Step 2 ***Nothing is perfect. If possible, go to your local supermarket and find problems with the way the store structures its products. If you have trouble finding an item, this may be a clue to a problem.***
- Step 3 ***Most stores place certain products in ways that make you notice and buy things that you otherwise might not buy. Identify parts of the supermarket's product display structure that make you slow down and notice or otherwise pay special attention.***

## Investigation: Meteorology

Beaufort Scale	Speed (Mph)	State	Visible Effects on Water and Land
0	<1	Calm	Water like mirror, smoke rises vertically
1	1-3	Light air	Small ripples on water, smoke drifts
2	4-7	Light breeze	Tiny waves, wind felt on face, leaves rustle
3	8-12	Gentle breeze	Some waves break, light flags extend
4	13-18	Moderate breeze	Whitecaps numerous, branches move
5	19-24	Fresh breeze	Bigger waves, spray, small trees sway
6	25-31	Strong breeze	Whitecaps everywhere, whistling in wires
7	32-38	Moderate gale	White foam in streaks, whole trees move
8	39-46	Fresh gale	Some high waves, small branches broken
9	47-54	Strong gale	Poor visibility from foam and spray, slight roof damage
10	55-63	Whole gale	Trees broken or uprooted, building damage
11	64-72	Storm	Widespread damage to structures
12	>72	Hurricane	Violence and destruction

The table above illustrates part of a structure for organizing wind—one of the main parts of weather. The set of names given to parts of something to organize it is usually called a “taxonomy.”