Bacteria on a leaf...
How do they eat?
What must they be able to do?

...release something (enzyme) to break down (digest) leaf molecules
...grab smaller molecules produced by digestion, move ‘em inside
...re-configure those molecules to make bacterial cell parts
Food in a hydra...
What must cells be able to do?

...cells lining stomach release enzyme to break down food molecules
...grab smaller molecules produced by digestion, move ‘em inside
...release some of those molecules for other cells to use, too (eg tentacles)
...all cells re-configure those molecules to make bacterial cell parts
There must be different cell types to do different functions
Food in a Bush...
What must cells be able to do?

...cells lining stomach release enzyme to break down food molecules
...grab smaller molecules produced by digestion, move ‘em inside
...release some of those molecules for other cells to use, too (eg tentacles)
...all cells re-configure those molecules to make bacterial cell parts

**There must be different cell types to do different functions—**
- Digestive system to break down food
- Transport system to move food molecules to other cells
- Gas exchange system to deal with CO$_2$ and O$_2$ etc