3rd grade, Life science: Adaptations
“Living things cause changes to their environments.”
Living things cause changes to their environments
How about other examples in nature?
Body parts
("biomass")

Wastes
(other chemicals)

Energy

organisms

Food
(chemicals)

Energy

environment
metabolism

the different chemical reactions that organisms conduct in order to survive, grow, and reproduce
What are some examples of metabolism?
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What are some examples of metabolism?
Metabolism causes organisms to use up different chemicals in the environment, and release different chemicals into the environment.
Body parts ("biomass")

Wastes (other chemicals)

Energy

organisms

environment

Food (chemicals)

Energy
Metabolism causes organisms to use up different chemicals in the environment, and release different chemicals into the environment. 

including gases!
Today’s experiment:

Yeast balloons
Yeast metabolism: fermentation

carbohydrates (sugars) \rightarrow \text{ethanol (alcohol)} + \text{carbon dioxide}
Form a hypothesis:

What will happen when yeast is added to sugar and warm water?
“I hypothesize that when yeast is added to sugar and warm water . . .”
Person 1: Balloon expert
Person 2: Sugar expert
Person 3: Yeast expert
Person 4: Gas expert
Today’s experiment:

Yeast balloons