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Funded by National Science Foundation [Graduate Teaching Fellows Program](#)
[in K-12 Education](#) (GK-12) DGE 0538555

My Goals in the GK-12 Program

- Learn how to teach
- Is teaching for me?
- \$

Smithsonian

National Museum of Natural History

Describe evidence for:

- Adaptation in each continent
- Human evolution




Nature's Best Photography

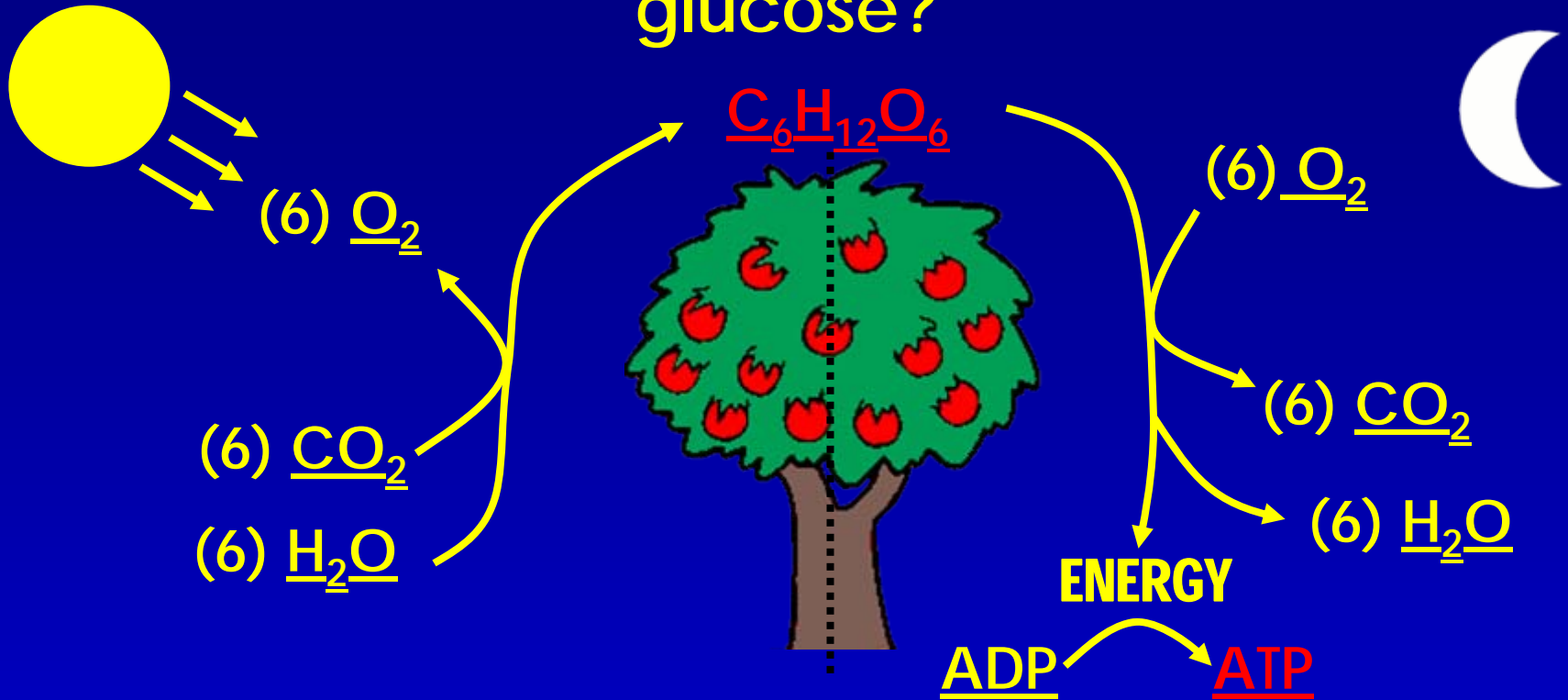
- Describe your favorite photograph



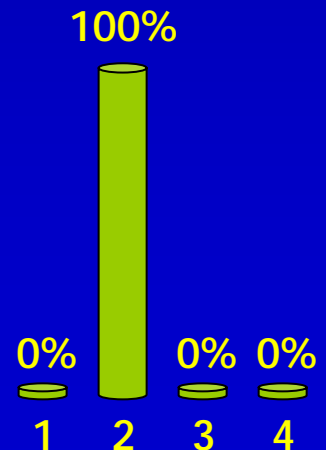
Interactive Assessments

- Assessments provided immediate feedback after each question to:
 - Students
 - Teachers
- General Concepts  Specific Details
- Right and wrong answers discussed after each question

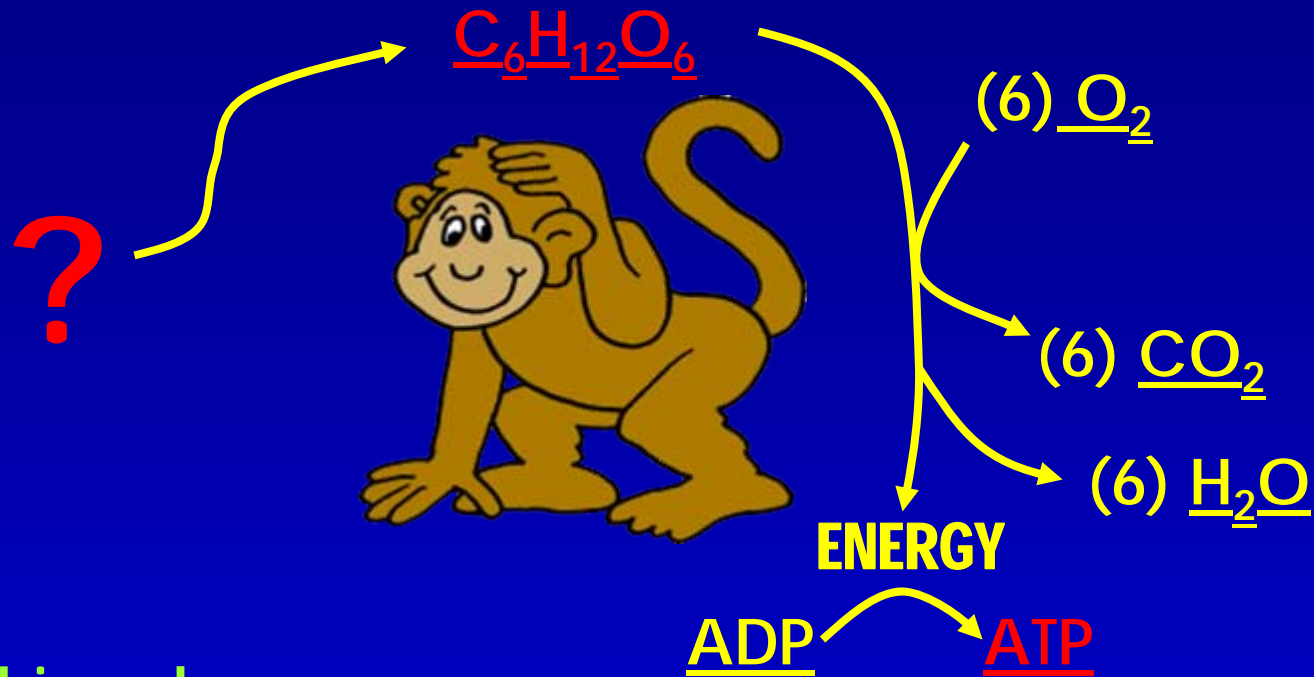
Sunlight is the _____ in this reaction to create glucose?



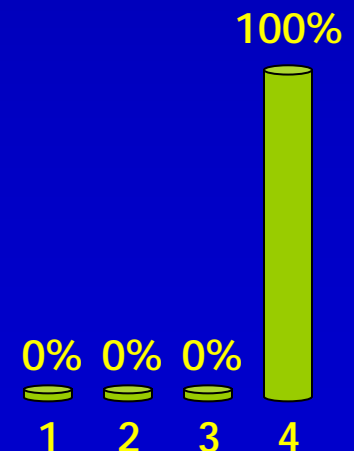
1. reactant
- ✓ 2. catalyst
3. product
4. can be either a reactant or product



Animals do not use photosynthesis to create glucose. Where do they get their glucose from?

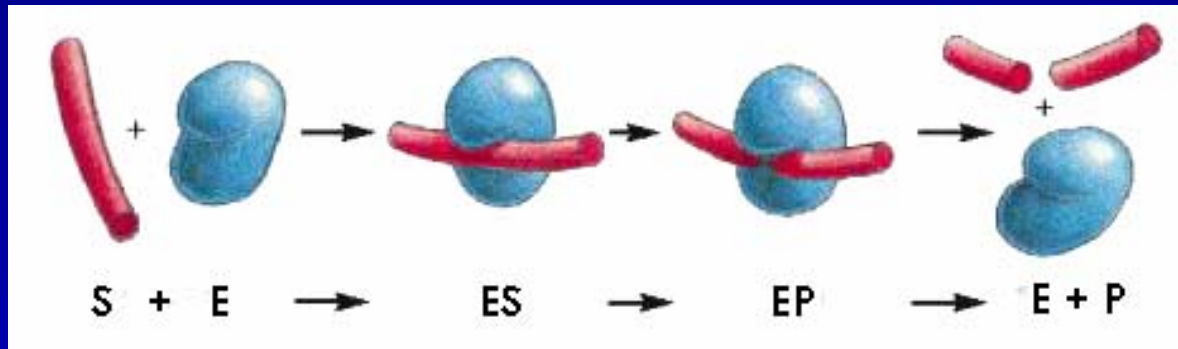


1. breaking down more complex sugars
2. eating plants
3. eating other animals
- ✓ 4. all of the above



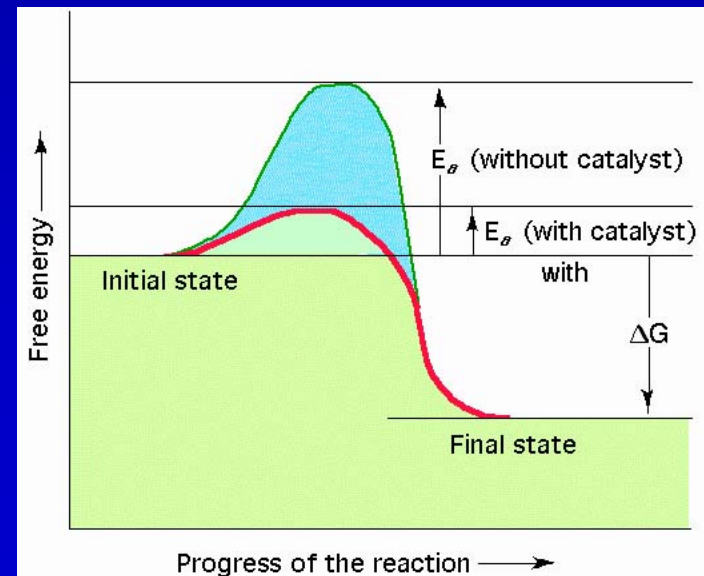
Enzyme Kinetics

Taught enzyme kinetics in Mr. Heeney's absence



Challenges:

- Classroom management
 - Vocabulary
- cleave, disassociate



Detergent and JELL-O™ Lab

- Some detergents contain enzymes
- Catalyze the digestion of protein based stains
- JELL-O™ is held together by the protein gelatin

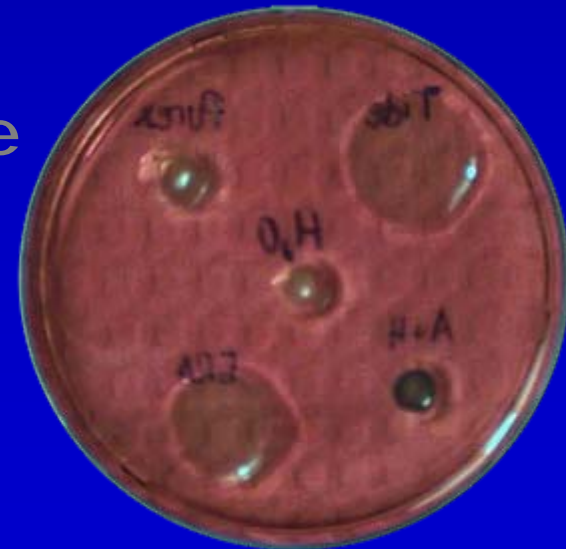


Tested hypotheses:

- Enzyme will increase reaction rates
- Increased temperature will increase reaction rate

Transfer task

- What effect would changing the pH have on the reaction?



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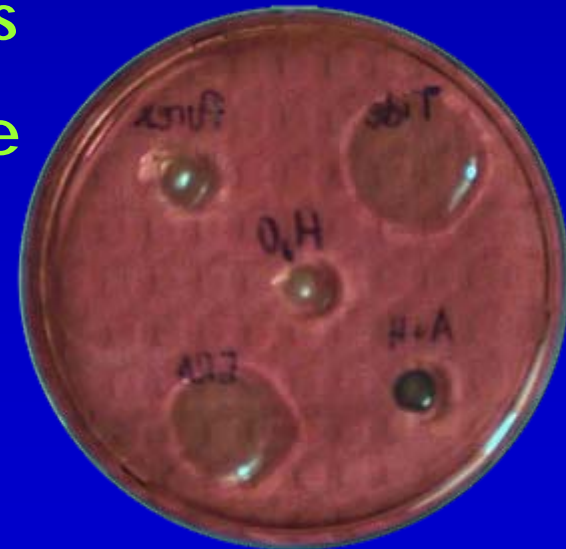


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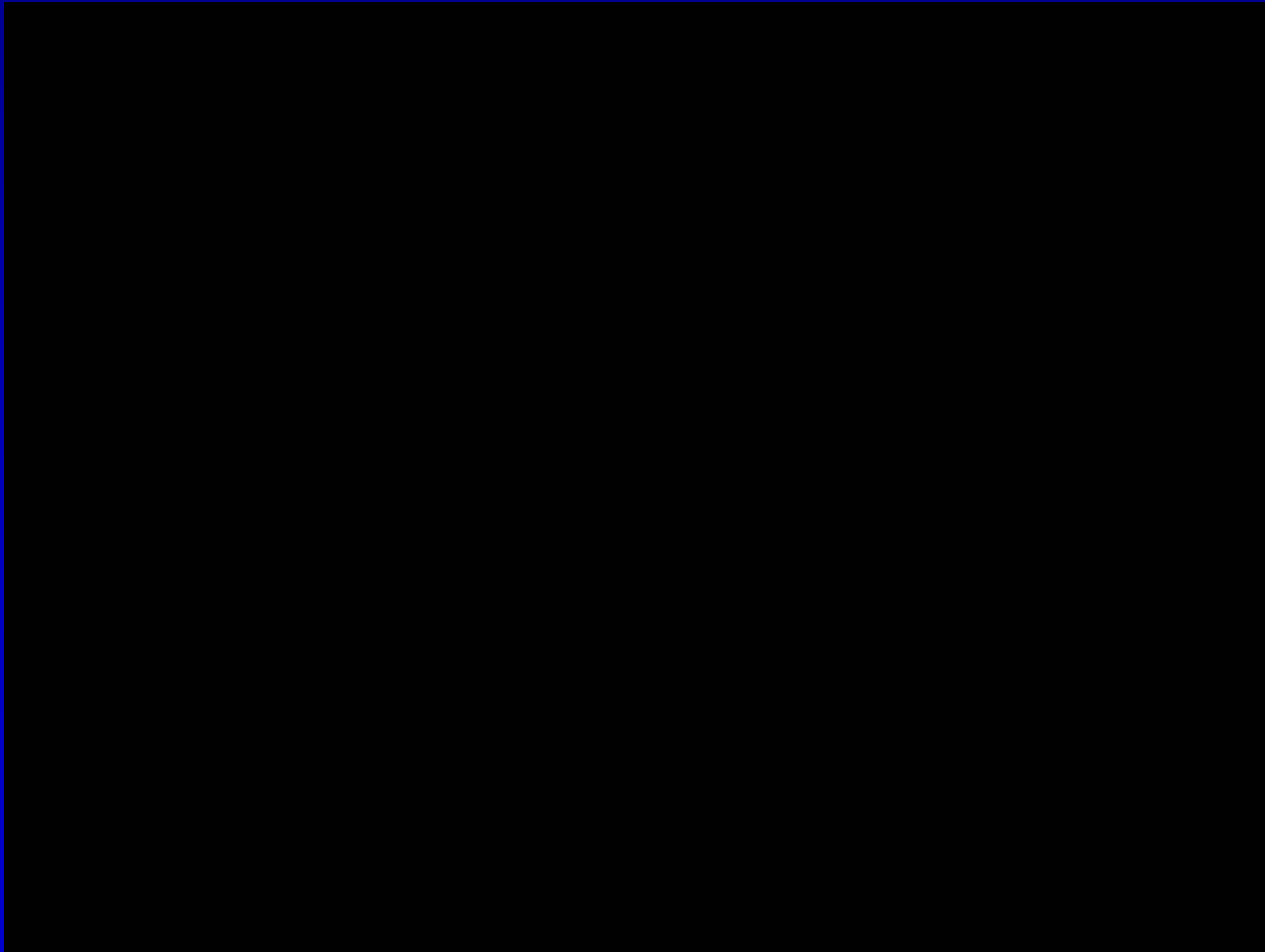
Deer Population Debate

- Research the deer population growth issue
- Groups of students research the debate from four perspectives
 - Homeowner
 - Hunter
 - Animal Rights Activist
 - Politician
- Presented their position and solutions to the class



Cell Organelles

- Asked to describe the function of cellular organelles
 - Students wrote songs, poems and skits



A Few of my Accomplishments While in the GK-12 Program

- Appreciation of a high school student's knowledge level
- Learned better/realistic teaching methods
 - Understand what works and doesn't work
- Learned the difficulties and rewards of teaching
- Developed a great respect for the work of teachers