The Role of Enzymes in Chemical Reactions
When have we talked about enzymes far?
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- Colorless Compound 1
- Colorless compound 2
- Intermediate pigment
- Isoxanthopterin (Violet-blue)
- Sepiapterin (Yellow)
- Drosopterin (red-orange)
- Isosepiapterin (yellow)
When have we talked about enzymes far?

In metabolic pathways:

- Ex. The mold needed enzymes to break down sugars

- Ex. Organisms use enzymes to break down fats to be used in cellular respiration
Enzymes Act as Catalysts

Exergonic Reaction: $\Delta G < 0$
- Reaction is spontaneous.

Endergonic Reaction: $\Delta G > 0$
- Reaction is not spontaneous.
Two Questions About Enzymes

1. What role do enzymes play in chemical reactions?

2. How is the structure of enzymes important for their function?
1. What role do enzymes play in chemical reactions?

\[ 2\text{H}_2\text{O}_2 \rightarrow 2\text{H}_2\text{O} + \text{O}_2 \]

Hydrogen peroxide

Enzyme = Catalase
## Part 1 Results

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<th>Rate of Reaction (1/sec)</th>
<th>New disks</th>
<th>Reusing disks</th>
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</tbody>
</table>

| Class Average            | 0.247     | 0.318         |
| Standard Deviation       | 0.054     | 0.081         |
2. How is the structure of enzymes important for their function?

• What questions do we have about how the conditions of the environment affect the structure, and therefore the functioning, of enzymes?