

# Retrieval checkpoints

**Retrieval checkpoints** consist of a set of rapid, low-stakes questions designed to strengthen memory and application, sharpen understanding, and maintain engagement throughout a class session. It includes **low-stakes questions**, all aimed at helping students retrieve key concepts repeatedly in a low-pressure, motivating way.

**Complexity :** ☕☕☐

**Group size:** small to large

**Format:** all formats

## Learning objectives / benefits

- Strengthen **retrieval practice** and long-term retention.
- Develop students' ability to **identify misconceptions**
- Incentives students to **develop their own strategy** for solving problems or approaching the topics presented in class

## Implementation

- **Choose key topics** students need to recall often (definitions, processes, calculations, common pitfalls).
- **Create 2–4 low-stakes questions** per 45-minute session. Mix formats as needed.
- **Use them during class:** an online tool, raised hands, cold-calling, or paired discussion for more complex topics.
- **Reveal the answer immediately.** Clarify misconceptions and encourage brief peer discussion.

### Question types:

- Single choice
- Binary-choice
- Fill-in-the-Blank
- Short explanation
- Ranking or ordering

### Examples:

A motor lifts a 20 kg object by 5 m in 4 seconds. Calculate the power output.

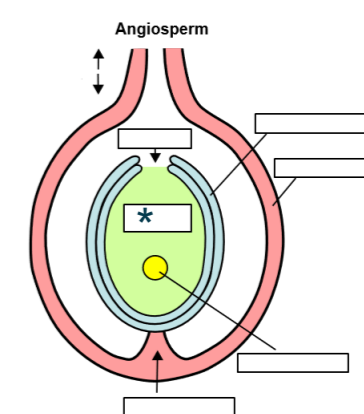
Which is the right formula for power?  
a.  $P = \frac{W}{t}$       b.  $P = mgh$

$$P = \frac{W}{t} \qquad P = mgh$$

\* Explanation: Students often confuse the **work formula instead of the power formula**

Select the right label for structure \* in the diagram.

- Nucellus
- Integument



## Recommendations

- **Keep quizzes short and frequent** to maintain momentum.
- **Use realistic distractors** based on common student misconceptions.
- **Lower anxiety when participation is low.** Allow anonymous responses in large groups.
- **Ask students to explain their reasoning**—to a classmate or the whole class.
- **Increase stakes and difficulty gradually** as students gain confidence.
- **Use this method to help students:**
  - build problem-solving strategies
  - retrieve and interpret chemical pathways
  - make decisions using established frameworks

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