How to Study Effectively: Spaced Repetition and Active Recall

Ages 11–18 · Study Skills

Name _____ Class _____ Date _____

A Key terms: match each term to its meaning

Write the letter of the correct meaning in the box next to each term.

1 **Active recall**	☐	**A** The finding that retrieving information improves later memory more than restudying it.
2 **Practice testing**	☐	**B** Retrieving information from memory without looking, for example by self-testing; also called retrieval practice.
3 **Distributed practice**	☐	**C** Mistaking familiarity with material for the ability to recall or use it.
4 **Testing effect**	☐	**D** Mixing different topics or problem types within one study session.
5 **Illusion of knowing**	☐	**E** Explaining in your own words how new information or each step of a solution fits together.
6 **Interleaving**	☐	**F** Low-stakes self-testing or practice tests done to learn, rather than to be graded.
7 **Self-explanation**	☐	**G** Spreading study of the same material across several sessions separated by gaps; also called spacing.

B Quick quiz

Circle the best answer, write its letter, then explain your choice in a few words.

1 **In Roediger and Karpicke's 2006 study, which group remembered more after one week?**

a) Students who re-read the passage **b)** Students who tested themselves
c) Both groups recalled the same **d)** Neither group recalled anything

Answer: _____ Why? _____

2 **Which two techniques did the 2013 Dunlosky review rate as high utility?**

a) Highlighting and rereading **b)** Summarisation and imagery
c) Practice testing and distributed practice **d)** Keyword mnemonic and underlining

Answer: _____ Why? _____

3 **As the time you need to remember gets longer, what happens to the best gap between reviews?**

a) It gets longer, but is a smaller share of that time **b)** It stays at exactly one day
c) It gets shorter **d)** It makes no difference

Answer: _____ Why? _____

4 **Why does rereading often feel more effective than it is?**

a) It strengthens retrieval the most **b)** It is rated high utility
c) It needs more effort than testing **d)** Familiar text feels known even when you cannot recall it

Answer: _____ Why? _____

5 **Which of these is an example of interleaving?**

a) Studying one topic for three hours **b)** Mixing different problem types in one session
c) Highlighting in several colours **d)** Rewriting notes neatly

Answer: _____ Why? _____

How to Study Effectively: Spaced Repetition and Active Recall

Answer key for teachers · Ages 11–18 · Study Skills

A Key terms

1	**Active recall**	**B**	Retrieving information from memory without looking, for example by self-testing; also called retrieval practice.
2	**Practice testing**	**F**	Low-stakes self-testing or practice tests done to learn, rather than to be graded.
3	**Distributed practice**	**G**	Spreading study of the same material across several sessions separated by gaps; also called spacing.
4	**Testing effect**	**A**	The finding that retrieving information improves later memory more than restudying it.
5	**Illusion of knowing**	**C**	Mistaking familiarity with material for the ability to recall or use it.
6	**Interleaving**	**D**	Mixing different topics or problem types within one study session.
7	**Self-explanation**	**E**	Explaining in your own words how new information or each step of a solution fits together.

B Quick quiz

1 b) Students who tested themselves

Students who repeatedly tested themselves recalled about 61% after one week, against 40% for students who repeatedly re-read, even though the re-readers read the passage more often.

2 c) Practice testing and distributed practice

Only practice testing and distributed practice received high-utility ratings; highlighting, rereading, summarisation, the keyword mnemonic and imagery for text were rated low utility.

3 a) It gets longer, but is a smaller share of that time

Cepeda and colleagues (2008) found the best gap grows with the retention interval but shrinks as a share of it: about 20–40% for a one-week goal, falling to about 5–10% for a one-year goal.

4 d) Familiar text feels known even when you cannot recall it

Rereading builds familiarity, which is easily mistaken for knowing. In Roediger and Karpicke's study, restudying raised confidence but produced poorer long-term recall than testing.

5 b) Mixing different problem types in one session

Interleaving means mixing different kinds of problems or topics within one session, so you practise choosing the right method as well as using it.