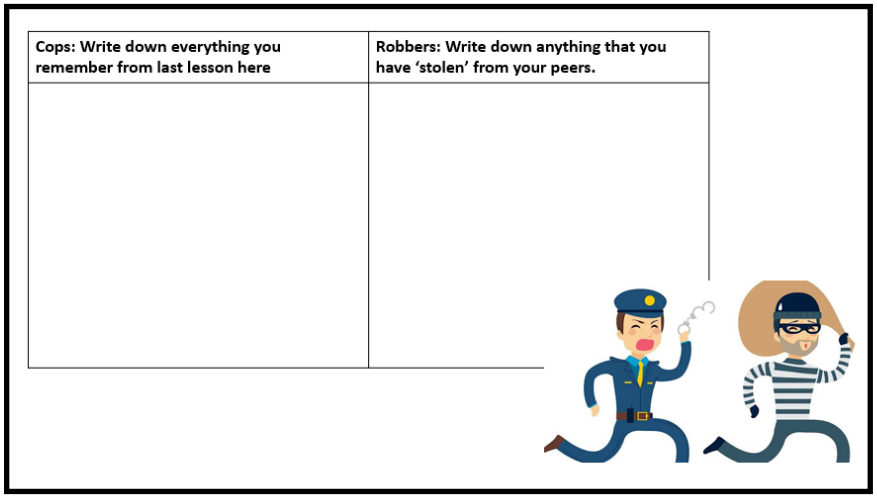
Barak Rosenshine's Principles of Instruction:

This publication presented 10 teaching and learning principles or strategies which are supported by research from both cognitive science and research on the classroom practices of master teachers. The principles and implications for classroom practice are summarised below.

Principle 1—Begin a lesson with a short review of previous learning

- This is effective because review can strengthen previous learning and improve recall. It also re-activates recently acquired knowledge, reducing cognitive load so pupils can then build on this knowledge more easily.
- According to Rosenshine this should be a short review, between 5-8 minutes, and should review the most important concepts from the previous lesson.
- Examples may include: discussing homework, peer-assessment of homework and low-stakes quizzes on the material from previous lessons (for more examples of review activities see my staff guide on retrieval practice and the retrieval practice templates—both can be downloaded from my Dropbox)

Examples:



J. Pearce, Walton High School, Stafford. Email: j.pearce@walton.staffs.sch.uk Twitter: @PearceMrs

Brain Dump

Write down anything you can remember about *last lesson*	**Prompt 1** *(Put something that you want pupils to include)*
	Prompt 2 *(Put something you want pupils to include)*
	Prompt 3 *(Put something you want pupils to include)*

'Five-a-day' sheet

Answer each of the five tasks in as much detail as you can

Question/ Task	Answer
A range of question types/tasks can be used including questions, key words to define, words to use in a paragraph to summarise a topic, images to describe, events to put into chronological order, etc.	

APPROACHES

Starter: Behaviourist approach

Key Terminology

Tabula rasa	
Classical conditioning	
Operant conditioning	
Nurture	
Observable phenomena	

List 3 researchers

Pavlov	Skinner	Watson

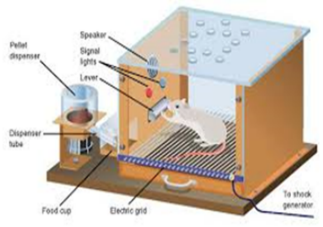
Context – Giving examples, explain the three terms within operant conditioning

1. Positive reinforcement -

2. Negative reinforcement -

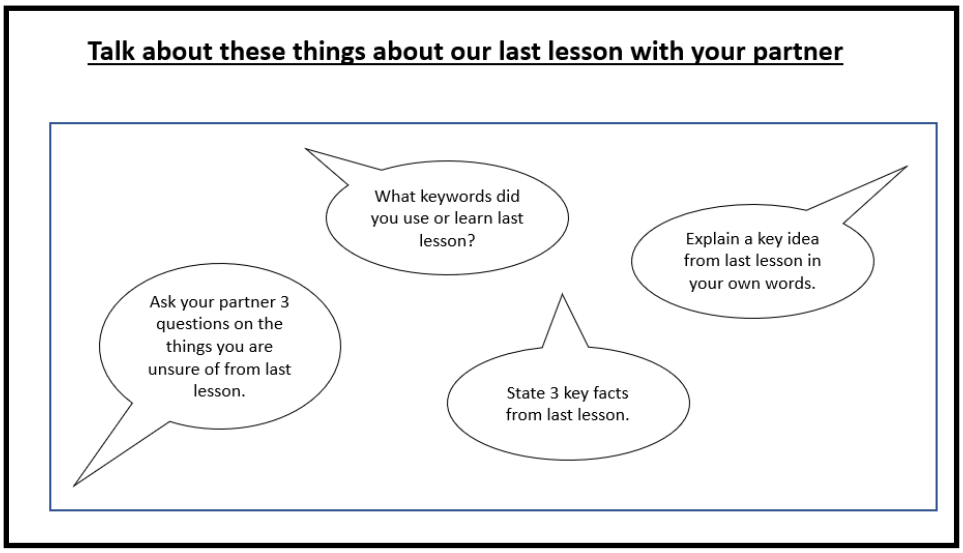
3. Punishment -

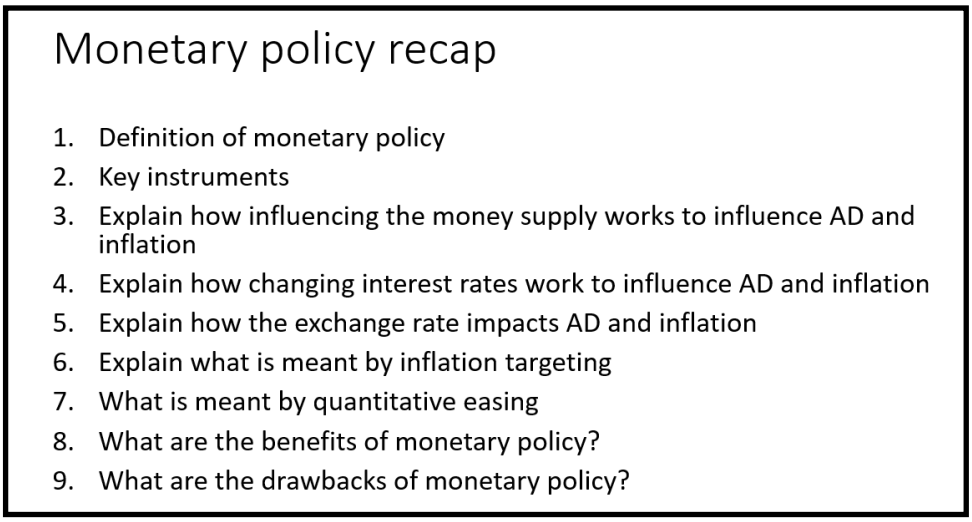
Source analysis



Bullet-point plan your answer

Outline & evaluate the behaviourist approach (16 marks)





Principle 2—Present new material in small steps

- Due to limited working memory, pupils are unable to process too much material at once. Therefore, we need to present information in small chunks.
- This requires teachers to break each topic and skill down into small steps.
- Students then need the opportunity to practise each step before moving on.
- Examples may include: writing an excellent paragraph, solving a mathematical problem, cooking a dish.
- For each topic, knowledge should also be presented in small parts rather than all at once.
- You can also achieve this by showing the 'big picture' and then zooming in to give pupils context to their learning.

Principle 3—Ask a large number of questions and check the responses of all pupils:

- Questions helps students to practise new information and make connections between this new information and their prior learning.
- This is also important as we cannot see learning and so we need as much feedback from pupils as possible.
- Successful questioning includes:

1. Asking questions to a large number of pupils.
2. Asking pupils to explain what they have learned.
3. Providing feedback and corrections.
4. Ask process questions – how did pupils come to that answer?
5. Cold calling - Call on students regardless of whether they have raised their hands.

J. Pearce, Walton High School, Stafford. Email: j.pearce@walton.staffs.sch.uk Twitter: @PearceMrs

5. No opt out - This is based on the expectation that it is not OK to not try. Therefore, students are not allowed to opt out of answering a question by saying they don't know.

- Option 1 - When a pupil says that he does not know the answer to a question, ask another pupil who does know the answer. You then ask the first pupil to repeat the answer to you again.
- Option 2 – When a pupil can't answer the question, ask another pupil in the class to give any knowledge needed to answer the original question. For example, if a pupil is unable to explain a dis-advantage of 'predatory pricing' ask another pupil to explain what predatory pricing is first.
- Option 3 - When a pupil says that he does not know the answer give him any necessary information needed to answer the question and then repeat the question again.

6. Say it again, better

7. Think, pair, share

8. Probing questions

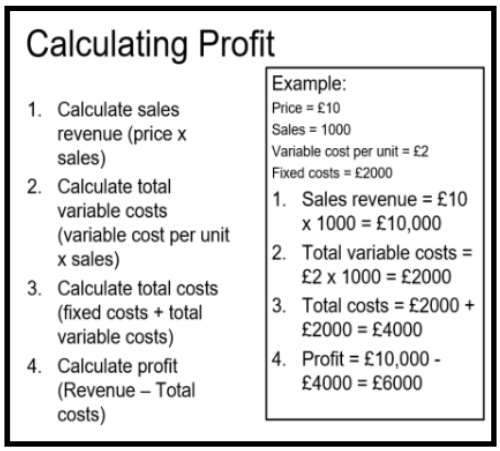
9. Whole-class response systems such as :

- Asking pupils to summarise the answer to a question in writing and then sharing/trading this with a partner.
- Writing the answer on card or a mini-white board and holding this up.
- Responding to multiple choice questions with a letter or colour-coded card.
- Asking pupils to raise their hands if they agree with the answer from another student.

Principle 4 – Provide models.

- This gives students cognitive support. This can include:

1. Worked examples (a step-by-step demonstration of how to perform a task or solve a problem).



2. Physical representations of completed tasks – e.g. exemplar paragraphs, artefacts

3. Explicit narration of thought processes as we are solving a problem/undertaking the activity

4. Physical manipulatives – e.g. blocks and shapes in Maths

5. Diagrams – e.g. of atoms in Science

- Rehearsal is needed to ensure that pupils do not forget new information, to allow for easier re-call in future and to ensure that pupils are fully prepared for working independently.
- Teachers should spend time guiding this practice.
- This should include:

1. Completing examples as a class.
2. Rephrasing and summarising new material.
3. Short-answer questions.
4. Live feedback - giving pupils feedback as they complete work.
5. Choral repetition.
6. Quick-fire questioning.
7. Scaffolding (see principle 8).
8. Modelling (see principle 4).

- This guidance should be 'faded' overtime, for example by pupils completing a larger quantity of the work on their own (example of this can be seen below), or by removing scaffolding, for example by not providing models or writing frames.

Question 1 - Discuss the impact to M&S of increasing expansion abroad:

1. State one benefit to M&S of expanding abroad - for example increased target market, fewer reduced seasonal sales, reduced competition in foreign markets.
2. Explain this fully with three strands of analysis (link to sales, profits, image).
3. Apply your answer to M&S – refer to the products they sell, the level of competition in the food market, high quality, high prices, their target market.
4. State one drawback to M&S of expanding abroad – for example different tastes and fashions, having to change their marketing mix, not being well known.
5. Explain this fully with three strands of analysis (link to costs, risk, sales).
6. Apply your answer to M&S

Question 2 - Discuss the impact to ASOS of increasing expansion aboard:

7. State one benefit to ASOS of expanding abroad
8. Explain this fully with three strands of analysis.
9. Apply your answer to ASOS
10. State one drawback to ASOS of expanding abroad
11. Explain this fully with three strands of analysis
12. Apply your answer to ASOS

Question 3 – Discuss the impact to Costa Coffee of increasing expansion abroad.

Principle 6 – Check for understanding.

Checking understanding can help students learn new material with fewer errors as teachers can identify and address any misconceptions. Checks also require the processing of this material which helps it to be transferred into the long-term memory. Methods that can be used to check understanding include:

1. Asking questions.
2. Asking students to summarise the material.
3. Asking students whether they agree or disagree with another student's answer.
4. Asking students to explain or defend their position or that of others.
5. Asking students to think aloud as they work.
6. Quizzes or any other review activities.

Principle 7—Obtain a high success rate

•Research found that a high success rate during practice led to a higher success rate when students then work on their own.

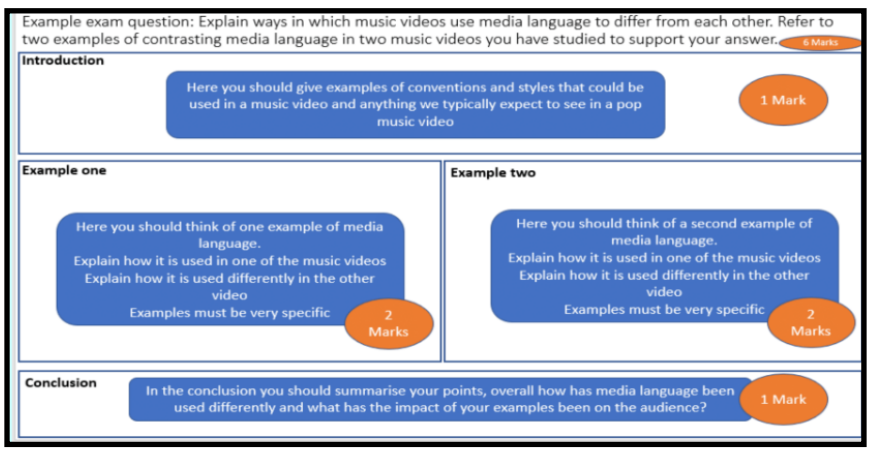
•Should be 80%!

•This it because it ensures that errors are not being rehearsed and learned, secures learning, improves fluency and confidence, whilst also ensuring that the work is sufficiently challenging.

Principle 8 – Provide scaffolds for difficult tasks

A scaffold is a temporary support that is used to assist learners. This allows learners to successfully complete these tasks and the scaffolds can then be withdrawn. Examples of scaffolds include:

1. The teacher modelling the steps required to complete a task.
2. The teacher thinking aloud as they complete a task.
3. Checklists.
4. A model of the completed task against which students can compare their work.
5. A list of prompts which breaks down the task into smaller steps.
6. Writing frames.



J. Pearce, Walton High School, Stafford. Email: j.pearce@walton.staffs.sch.uk Twitter: @PearceMrs

Principle 9 – Require and monitor independent practice.

- Independent practice is needed in order for skills and knowledge to become automatic. When material is learned it does not take up any space in the working memory and more attention can then be devoted to comprehension and application.
- Independent practice should be completed for both class and homework.
- When completed in class, the teacher should circulate the room, monitoring pupils' work and intervening where necessary.
- Can include explaining something to another pupil, writing without support, solving problems without support, etc.
- It also includes pupils checking their own work using models, checklists, etc.

Principle 10 – Engage students in weekly and monthly review

- Students need to do extensive and regular practice in order for knowledge to become automatic. This enables knowledge to be transferred to the long-term memory, which then frees up the working memory.
- Students should be required to recall knowledge from both previous weeks and months to ensure that information is recovered multiple times.
- Pupils should self-check their work after completing it from memory, to benefit from the hypercorrection effect.
- Retrieval practice must be generative and so must not be competed with notes, prompts or resources.
- Use as much variety as possible so that pupils are required to retrieve their knowledge in different ways/formats.

Retrieval 'Power Ticket'

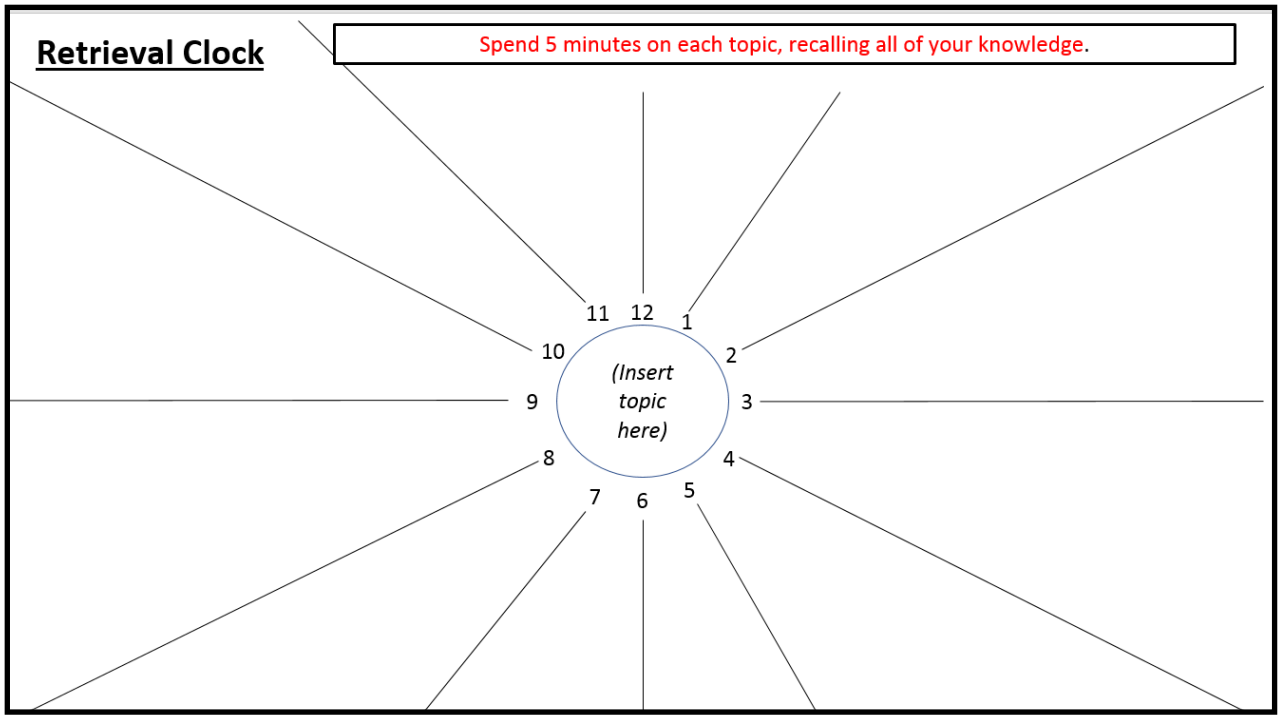
Write three facts that you have learnt today, yesterday, last week, last term and last year in the boxes below

	Today	Yesterday	Last Week	Last term	Last year
Fact 1					
Fact 2					
Fact 3					

J. Pearce, Walton High School, Stafford. Email: j.pearce@walton.staffs.sch.uk Twitter: @PearceMrs

Retrieval Clock

Spend 5 minutes on each topic, recalling all of your knowledge.



'Know it all' sheet

Write as much as you can in each of the boxes

(Put aspects of the topics in each box)	*(Put aspects of the topics in each box)*	*(Put aspects of the topics in each box)*
(Put aspects of the topics in each box)	*(Put aspects of the topics in each box)*	*(Put aspects of the topics in each box)*

For more examples of review activities see my staff guide on retrieval practice and the retrieval practice templates—both can be downloaded from my Dropbox.

References:

T. Sherrington, 'Rosenshine's Principles in Action', Woodbridge: John Catt, 2019.
B. Rosenshine, 'Principles of Instruction: Research-based Strategies That All Teachers Should Know', American Educator, 2012.
K. Jones, 'Retrieval Practice : Research and Resources for Every Classroom', John Catt, 2019
D. Lemov, 'Teach Like a Champion 2.0' Jossey-Bass, 2016

J. Pearce, Walton High School, Stafford. Email: j.pearce@walton.staffs.sch.uk Twitter: @PearceMrs