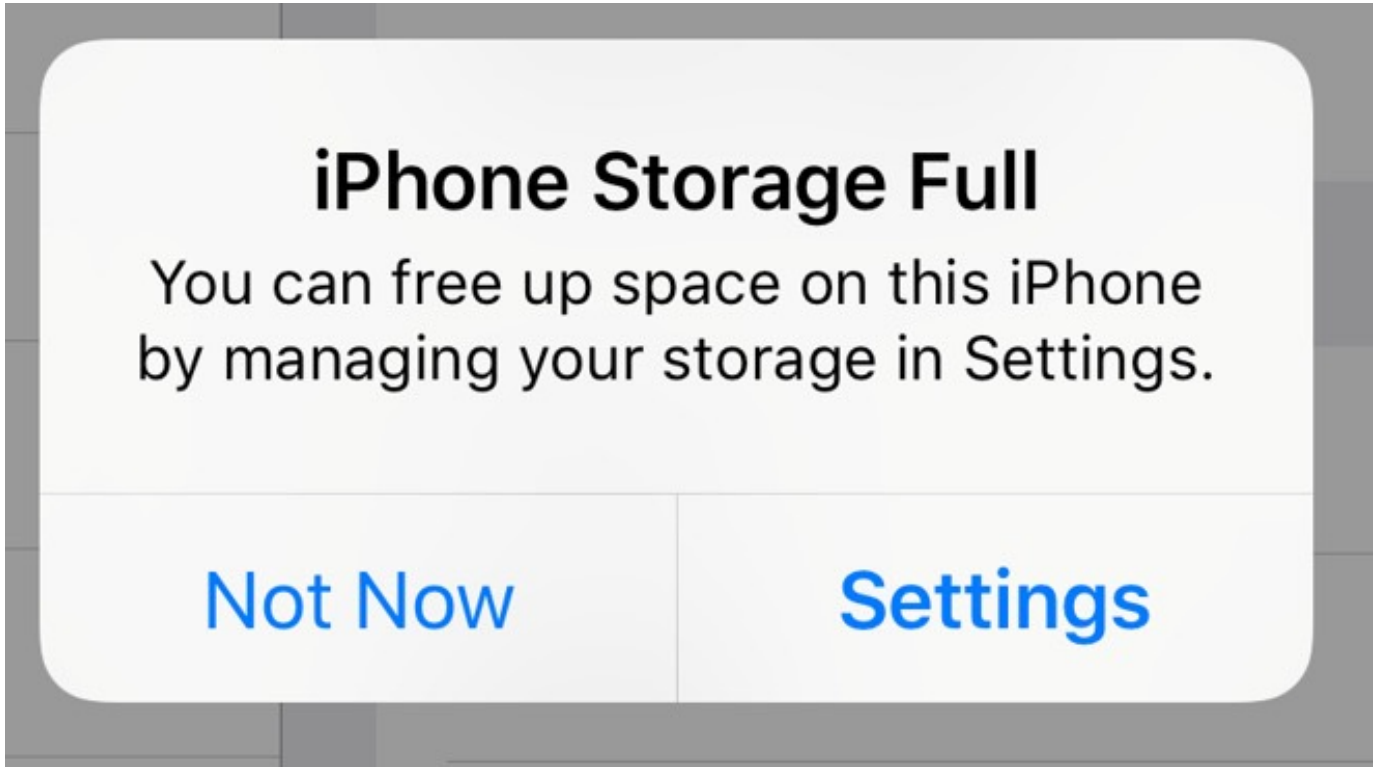
How do we learn?



How do we learn?

Environment

Working memory

Long-term memory

If you had to explain how each of these helped us to learn something, what would you say?

Environment

- Everything outside of our minds
- Unlimited external store of information

Long-term memory

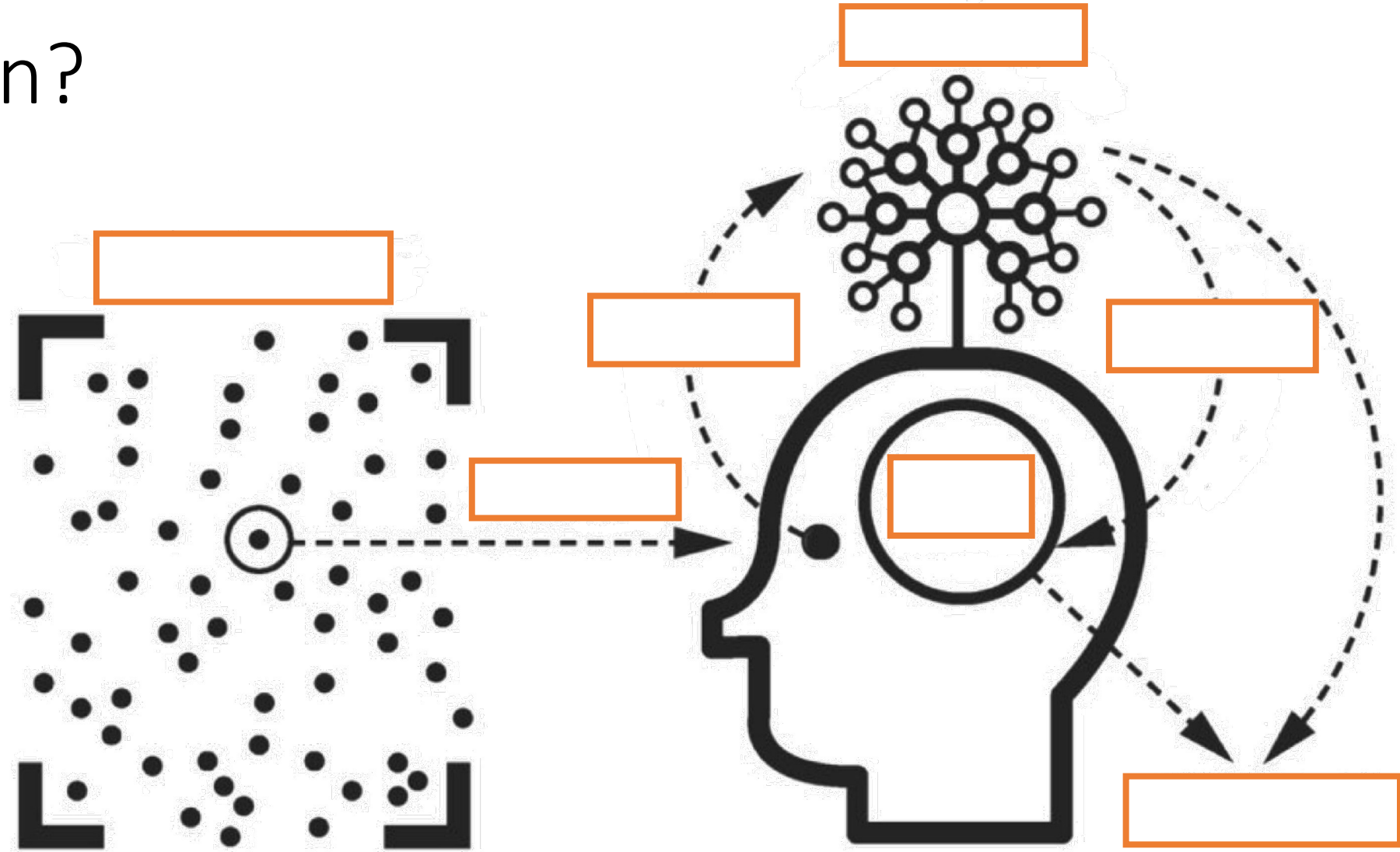
- Where all of our memories are kept
- Internal and unlimited

Working memory

- All thinking happens here
- Internal and limited

How do we learn?

Long-term memory
Forgotten
Environment
Attention
Learning
Remembering
Working memory



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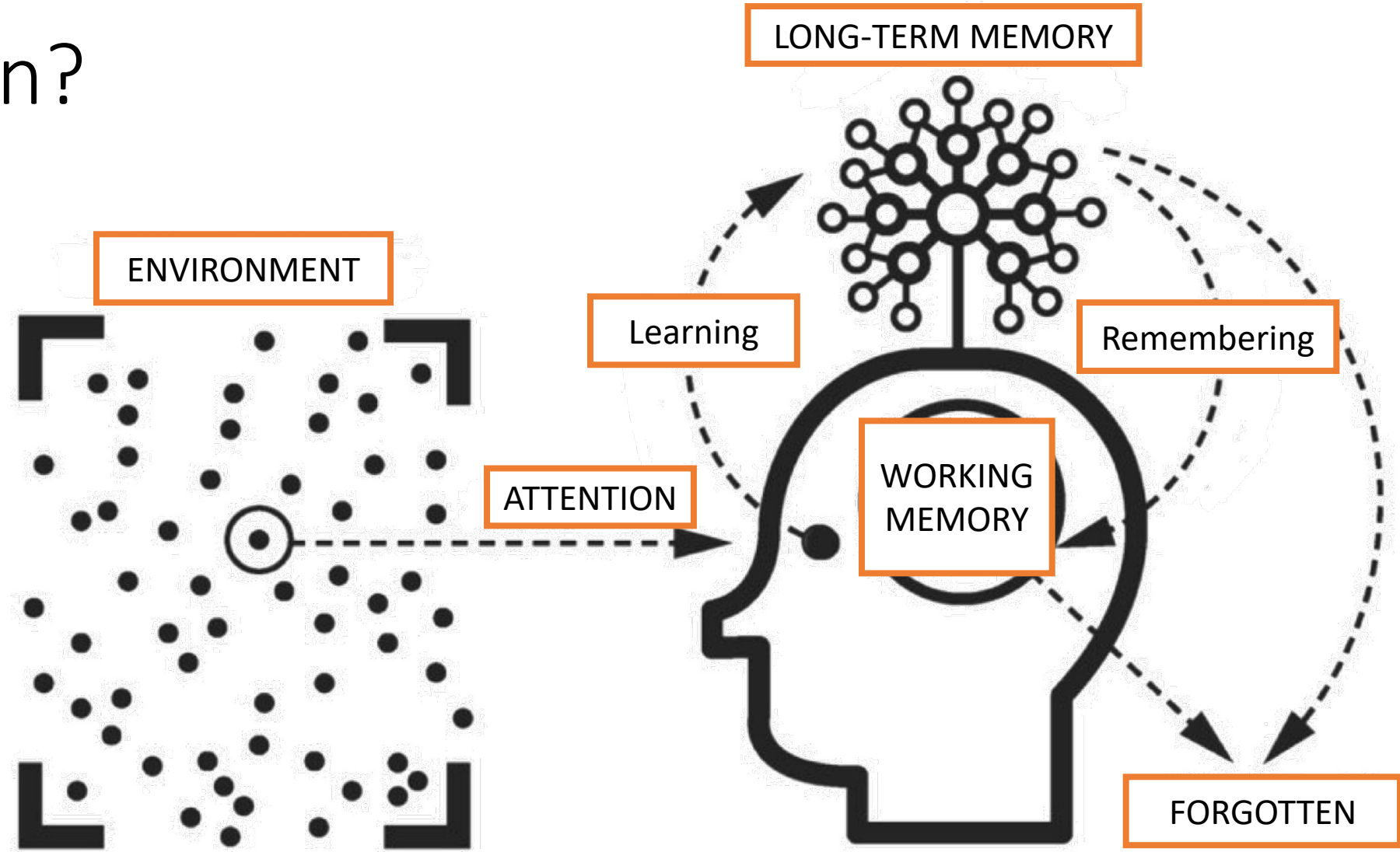
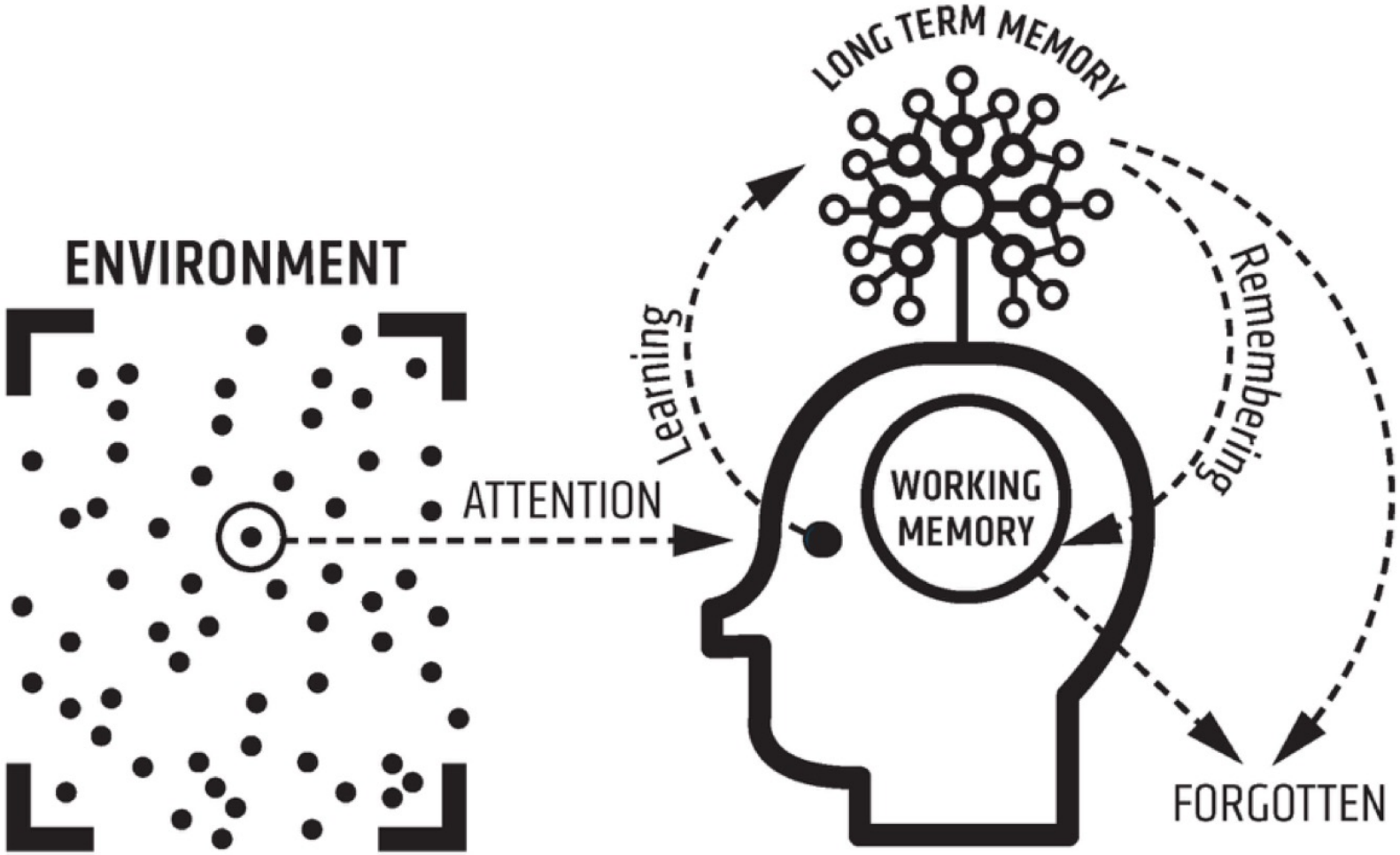
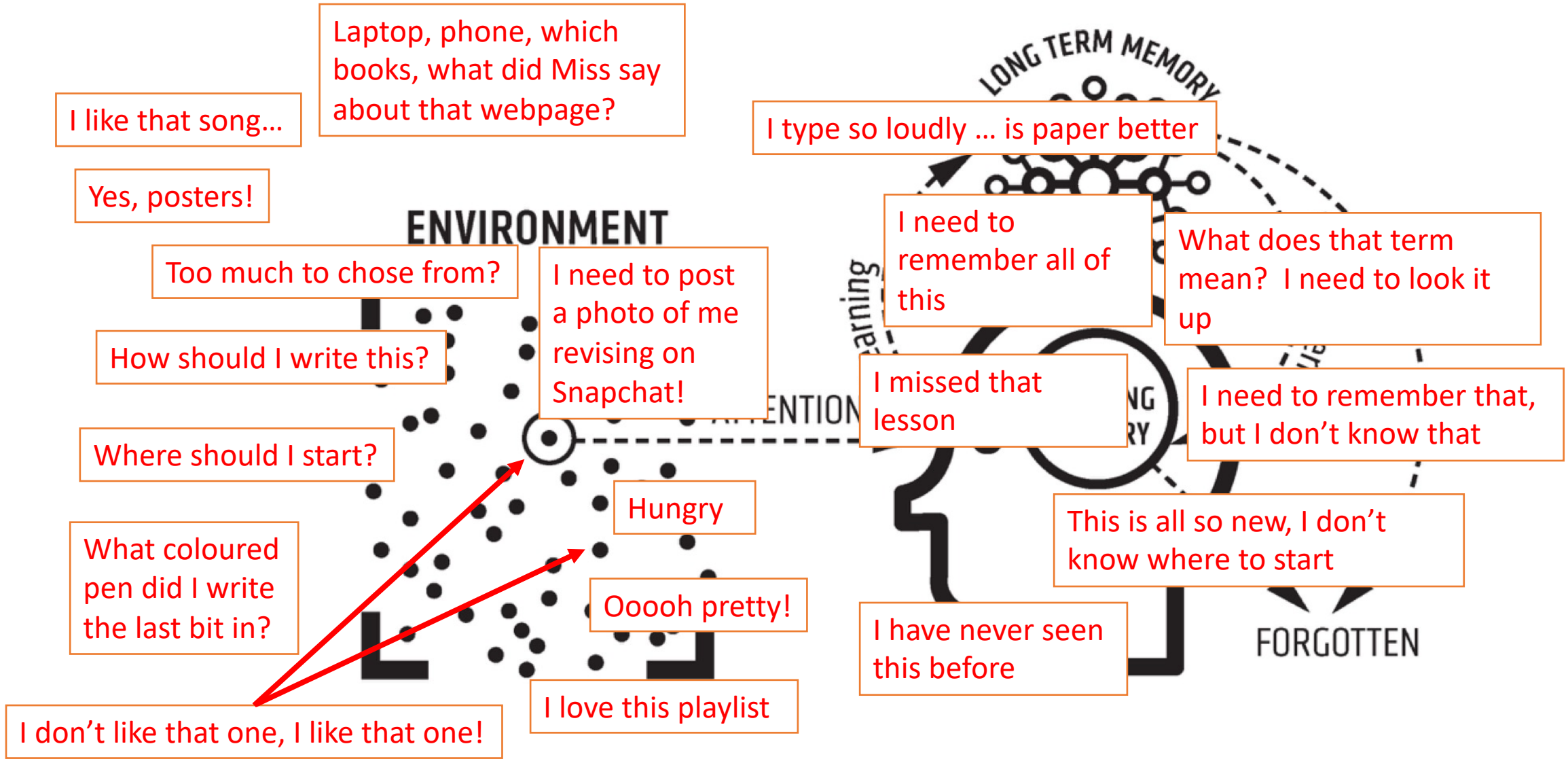


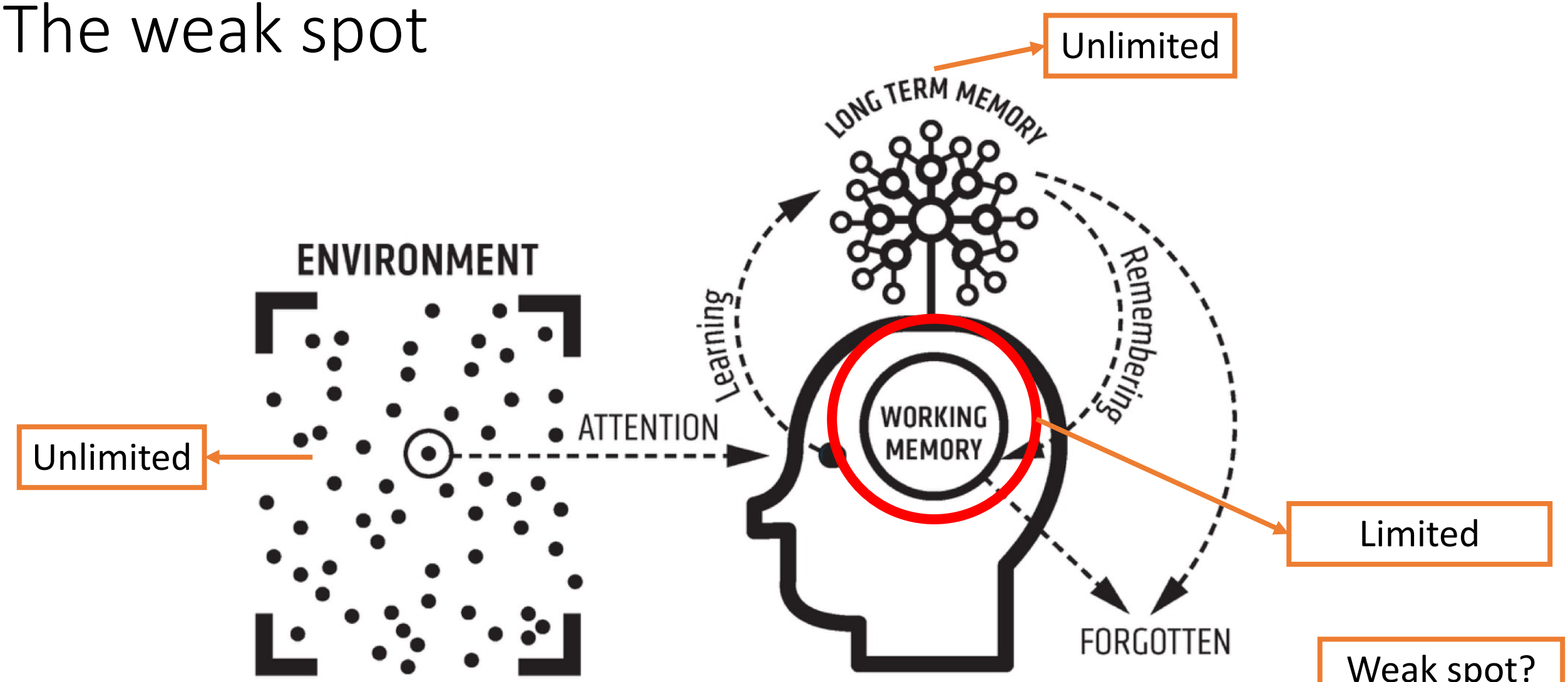
How do we learn?



What are the potential issues for our learning?



The weak spot

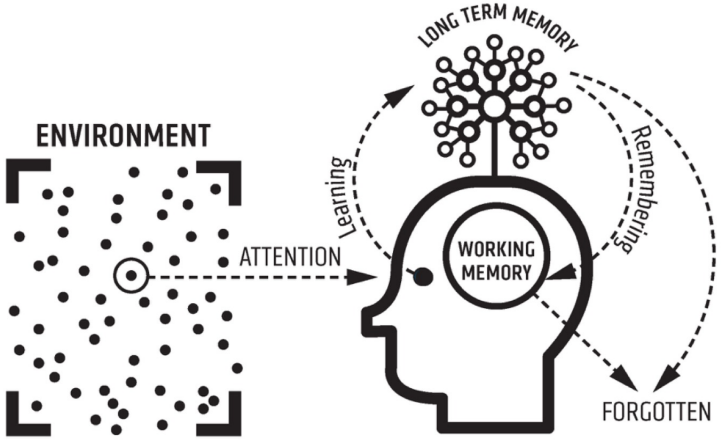


Working memory is the bottleneck of thinking

Why is working memory so important?

- New information takes up more room than familiar information
- Trying to take in too much new information:

Cognitive overload



- The more you do an action, the more automatic it becomes
- Embedding knowledge in long term memory makes it easier to learn more because

Knowledge is sticky

What is the problem with working memory?

- How to manage new information?
- How can we stop forgetting things?
- What if the **environment is not right for me**?

How can we improve our learning?

Breaking down the barriers to 30:70

Topics to cover

- Environment
- Growth mindset
- Habits and emotions
- Memory
- Metacognition

Focus for the week: your learning environment

- Discuss:
  - How and where do you like to study?

What can reduce the effectiveness of your learning environment?

1. Who is around you, and what that means to you - individual
2. The bandwagon effect - community
3. Whether you listen to music, or put headphones on, or study in a noisy area
4. Thinking you know it all already
5. Thinking other people are just better than you
6. Tiredness
7. Mobile phones
8. Not knowing how to work together effectively
9. Paper or laptop?
10. Decor

Action points – make our learning environment work

Problem

1. The people around you
2. Your year group culture
3. Music
4. Over-confidence
5. Lack of confidence
6. Tiredness
7. Mobile phones
8. Collaboration
9. Paper or laptop
10. Decor

Reframe

1. Self-talk, breath, refocus and reframe
2. Reframe your friendships
3. Are you learning something new? Minimise distractions
4. Know where you are at – review your knowledge.
5. Self-talk. Reflect on what the next step is
6. Aim for 30 minutes earlier. Consistent bedtime.
7. Put of sight, out of mind
8. Divide a set of topics up - teach each other.
9. Try lined paper
10. Choose a study area with fewer distractions

Learning summary

- Working memory is the bottleneck of learning
- Extraneous information takes up space in working memory and limits the amount of intrinsic information we can process
- Knowledge is sticky – the more you learn, the easier it is to learn more
- Your learning environment is crucial to your learning success

Tutor reflection

- Can you explain the process of learning to your partner?
- Why is working memory the ‘bottleneck’ of thinking and learning?
- How many pieces of information can we process in our working memory?
- What aspects of our environment can reduce the effectively of working memory?
- What are you doing this week to maximise the effectiveness of your learning environment?

How do we learn?

Please wait for Mrs McMahon-Boyd to introduce each task before starting

Long-term memory
Forgotten
Environment
Attention
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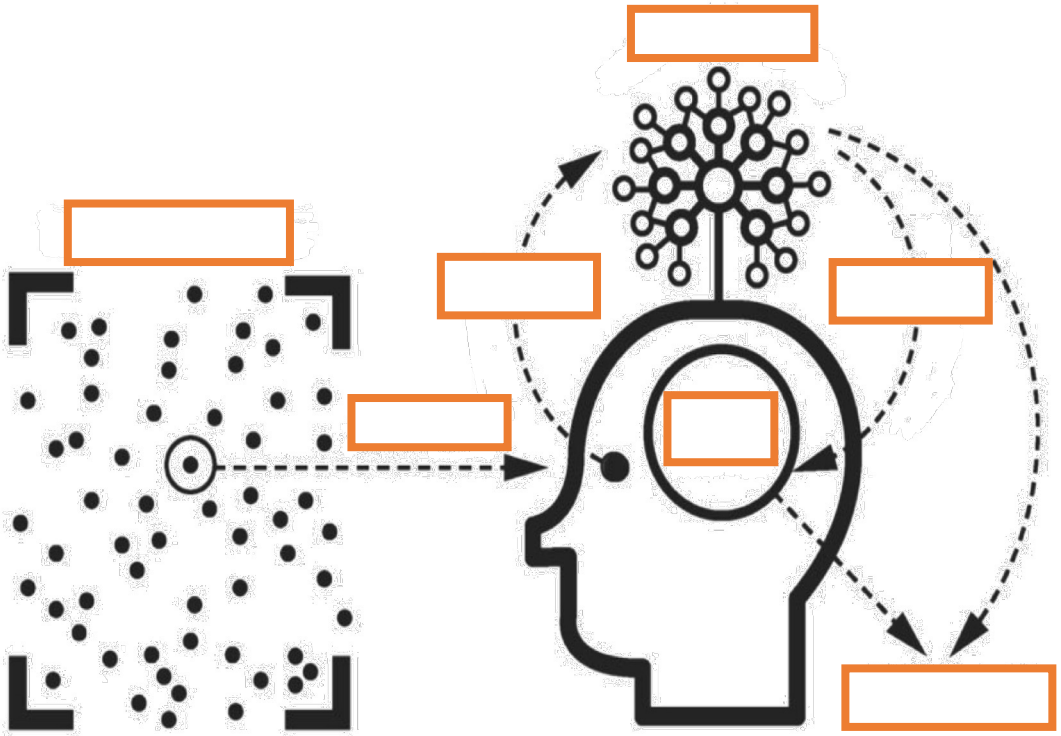
Remembering
Working memory



Task: label the diagram of how we learn

Task: explain how learning happens, using the diagram

Task: What issues might arise in this process that would interfere with our learning?