This resource outlines small, in class activities that can be used whilst teaching the memory topic. They can be introduced individually as and when needed or as a carousel activity at the end of the models of memory section.
VISUO SPATIAL SKETCH PAD

The visuo spatial sketchpad processes visual and spatial information in the STM so the activity needs to be using the inner eye.

The most well-known method is to ask students to count the number of windows at home (without leaving the classroom... obviously!)

An activity to test this component has been asked about on the exam paper, so if they have at least tried this they may remember it!
The articulatory process is one of the hardest to test. You can ask students to say their name and address to themselves in any accent they can do, but there is no way of actually checking they’ve done it (other than the way they laugh at themselves trying!).

An alternative is to ask them the 2nd 5th and 10th words of a well-known rhyme such as ‘Ring a Ring of Roses’... without them saying the words out loud.
The phonological store activity needs to test short term retention of auditory information. This can be done by a task called ‘shadowing’. Students need to work in pairs for this activity. One should read the passage below out loud and their partner should repeat what they say after a 1-2 second time delay. They then should reverse roles. Please note that this could be argued a best sensory memory task, but it is useful for them to think about what the phonological store does.

The activity of shadowing is really useful but can be massively irritating for the person being shadowed. It’s like having an annoying little five year old sister or brother who insists on repeating everything you say. At least in experimental conditions you know that you only have to be shadowed for a short amount of time.
Autobiographical memory, whilst not mentioned on the specification, is useful for students to know as it is the kind of memory often affected in case studies. HM is an example of this as he could not remember new autobiographical memories but could retain procedural memories taught to him after his operation (see activity 5).

Autobiographical memories are personal memories so for this activity you simply ask students to write down the answer to the following questions...

1. Who was the last person you sent a text to?
2. What was the last thing you ate when you were on your own?
3. What was the last piece of music you listened to?
This activity is designed to teach students a procedural skill. You will need a small mirror, one copy of the ‘Stars sheet’ per person completing the activity and a box with one end cut fully out and the opposite end with a part cut out to be able to put your hand through with a pen. This is illustrated in the picture below.

The idea is for students to draw a line between the stars on the paper by looking in the mirror. This was done by HM every day for half an hour for six months and although he could never recall having done it before (autobiographical memory), he got better at it. This, together with Activity 4, clearly illustrates that there are different types of long term memory, something which the Multi store model of memory did not account for.
This activity is designed to test the capacity of STM. It is the digit span technique.

**Tell students...**

‘You are going to listen to a series of numbers. When I raise my hand it signals the end of the list and you should immediately write down the digits in order. The number of digits in the list will increase with each trial. If you lose track of the digits please stay silent so that it doesn’t affect the recall of others.’

You then will read out the following numbers to them. If you generate your own list remember not to use ‘7’ as it is two syllables.

| List 1: | 2 8 1 5 |
| List 2: | 9 2 5 1 4 |
| List 3: | 8 1 8 4 6 3 |
| List 4: | 9 6 1 2 1 5 3 |
| List 5: | 3 8 1 1 6 2 6 4 |
| List 6: | 4 5 1 9 6 2 4 1 6 |
| List 7: | 6 2 5 6 1 9 3 2 9 1 |

Most students will manage up to list 3, but as Miller’s magic number 7 dictates, the peak should be for List 4. For all subsequent lists there will be less students able to complete the task. An alternative activity is to ask them to remember a mobile phone number.
SENSORY MEMORY
(visual)

This is designed to show how briefly information stays in sensory memory. Give all students a piece of paper and a detailed picture (turned face down). They are told they can look at the picture for 20 seconds and then turn it back over again. They then have to draw as much detail as they can remember. Do this 4 times. Giving them longer will make little difference as the visual memory disappears rapidly once it is no longer visible.
You will need your desks to be arranged as a circle with chairs at either side. The desks should be labelled Activity 1, Activity 2 and so on... The activity instruction cards should be placed on the corresponding desks. Activity 5 will also need 14 copies of the Star sheet on the desk, a mirror and the box. Activity 7 will need plain pieces of paper, one for each student and a copy of the picture for the person running the activity.

Each activity will be run by a student at the desk, with another student sitting across from them completing the activity. They will have the student response sheet with them to record their answers (it also serves as a prompt in their files when they look at it later).

Every 3 minutes you should blow a whistle/ shout (it will be noisy) so that students know to move onto the next activity.

After students have been through all 7 activities (which should take approx. 25 minutes) the students swap roles so each student has completed the activity.

Any time left at the end of the lesson should be spent answering the questions on each activity on their sheet. If you run out of time, filling the sheet out can be a homework activity.
<table>
<thead>
<tr>
<th>Activity</th>
<th>Response to the activity</th>
<th>Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity 1</td>
<td>How many windows did you count?</td>
<td>Which component in memory was this testing?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Which model is it included in?</td>
</tr>
<tr>
<td>Activity 2</td>
<td>2nd word</td>
<td>Which component in memory was this testing?</td>
</tr>
<tr>
<td></td>
<td>5th word</td>
<td>Which model is it included in?</td>
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<tr>
<td></td>
<td>10th word</td>
<td></td>
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<tr>
<td>Activity 3</td>
<td>Nothing to write down. Shadowing task.</td>
<td>Which component in memory was this testing?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Which model is it included in?</td>
</tr>
<tr>
<td>Activity 4</td>
<td>1)</td>
<td>What type of memory is this?</td>
</tr>
<tr>
<td></td>
<td>2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3)</td>
<td></td>
</tr>
<tr>
<td>Activity 5</td>
<td>Activity on the Star sheet</td>
<td>What type of memory is this?</td>
</tr>
<tr>
<td>Activity 6</td>
<td>1)</td>
<td>Which component in memory was this testing?</td>
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<td></td>
<td>7)</td>
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</tr>
<tr>
<td>Activity 7</td>
<td>Response on a plain piece of paper</td>
<td>Which component in memory was this testing?</td>
</tr>
</tbody>
</table>
INSTRUCTIONS FOR ACTIVITY 1

Please read these instructions to your participants...
It may help you to close your eyes for this task.
How many windows do you have in your house?

INSTRUCTIONS FOR ACTIVITY 2

Please ask your participants:
• Firstly say their name and address to themselves in any accent of their choice
• Give you the 2nd 5th and 10th words of any well-known rhyme of your choice?
INSTRUCTIONS FOR ACTIVITY 3

Read this out to your participants...
I will read a passage out to you and I would like you to repeat what I say with a 1-2 second time delay. Then we will swap roles.

The passage...

The activity of shadowing is really useful but can also be massively irritating for the person being shadowed. It is like having an annoying little five-year-old sister or brother who insists on repeating everything you say. At least in experimental conditions you know that you only have to be shadowed for a short amount of time.

INSTRUCTIONS FOR ACTIVITY 4

Please ask your participants:
1. Who was the last person you sent a text to?
2. What was the last thing you ate when you were on your own?
3. What was the last piece of music you listened to?
INSTRUCTIONS FOR ACTIVITY 5

Please draw a line between the stars by looking in the mirror.
Try not to touch the star outlines.

INSTRUCTIONS FOR ACTIVITY 6

Read these instructions to your participants...

You are going to listen to a series of numbers. When I raise my hand it signals the end of the list and you should immediately write down the digits in order. The number of digits in the list will increase with each trial.

Read the digits to the participant, raising your hand when you have finished each list as a signal for them to write the digits they can remember down... in order!

**List 1:** 2 8 1 6
**List 2:** 9 2 5 1 4
**List 3:** 8 1 8 4 6 3
**List 4:** 9 6 1 2 1 5 3
**List 5:** 3 8 1 1 6 2 6 4
**List 6:** 4 5 1 9 6 2 4 1 6
**List 7:** 6 2 5 6 1 9 3 2 9 1
INSTRUCTIONS FOR ACTIVITY 7

Please read these instructions to your participant...

‘On the desk in front of you is a piece of paper which is turned down so that you cannot see the picture on it. In a moment I am going to ask you to look at the picture for 20 seconds and then place it back on the desk so you cannot see it. You should then try to draw the picture from memory. This will happen 4 times. I will tell you when your 20 seconds is up!’

Time them for 20 seconds with each trial.