

Classroom Routines: Getting the most out of your lessons

Mike Nelson shares his classroom practice.

As educators, we are constantly striving to ensure our classrooms are the best places for students to learn and grow, one in which students are on task and engaged in their learning. As we all know, the needs of our classrooms change, most definitely from year to year but also sometimes within the same year. As a result, high quality educators always have a range of 'tools in their toolbox' for both helping students stay on task during lessons but also ensuring that they are actively involved in learning rather than passively participating in tasks. Within this article, I will outline seven classroom practices, many of which build on the work of Dylan Wiliam, that I hope you might find useful.

1. Activating our learners

Missing Answers

A potential routine for assisting students to identify simple mistakes in their work is called Missing Answers (see Wiliam 2020). This can be used as a formal assessment task, but it can also be used for more general classroom work. The students complete the assessment and/or task, which is then marked. The Missing Answers routine is useful in ensuring that the answers on the assessment/task were completely accurate of what the students knew.

As educators, we know our students and the level of self-assessment they are capable of participating in. For students that are capable enough, they would be given their assessment back and told that, "x of them are wrong. I want you to find them and fix them." This process gives us valuable formative assessment information. One, if the student's answer is a simple error, then students should be able to correct it with further teaching. If a student, having completed the assessment once, cannot look through the assessment a second time, identify a simple mistake and correct it, I would argue that it is no longer classed as a simple error and becomes an area of need for the student. Secondly, if a student identifies what is a correct answer and changes it to something that is now not correct, this is a not an area of learning that they have mastered. This can also become a focus for future learning.

For students with lots of errors in their assessment, we may only want one or two of the questions corrected. For these students, we would identify the questions by highlighting them and saying "These

two are incorrect. Can you correct them for me?"

This is not a routine that can or should be used with every piece of work or assessment. Often, there will be times when speaking to the students about their answers is more beneficial, or the task requires students to show their work. But it is a great way of incorporating feedback and allowing students to do the thinking. Initially when introducing this routine with my students, there was push back from them. When I asked them why they did not like it, the answers I got could be put into two categories. The first was the way they saw their role in assessment. In their own words, "The teacher gives us the test. We do it and then the teacher tells us which ones we got right and wrong. If we got them wrong, they told us what the answer should be, so we knew it next time". I asked them if they thought any of the information given to them would help them with the work they were going to do, to which they responded, "No". This then led into the second category of answers, which relates to the role students view themselves as playing within assessment and learning. The second response was that the assessment was for the teacher, not for the student. They did it so teachers know what to teach and it did not matter what they got wrong because the teacher would tell them during the lessons. If it was an end of unit test, it mattered even less because the unit was over and if they did the topic again, they'd do another test. Through implementing the Missing Answers routine, students began to have a greater role in the assessment process. As the year went on, students began to become enthusiastic participants within the routine, and in a very pleasing outcome, some began to rate their confidence with their answers before submitting it.

Triage

Triage comes from the work of Dylan Wiliam (Wiliam 2020). We all know the students in our class who had questions very early on in instructions but did not ask them. When they are asked why, often they state they thought they might be stupid questions. This is where the triage routine comes in. In the emergency department, patients are triaged not only based on the severity of their presentations, but also to know who needs to treat them. In the classroom, it uses a similar concept. After an explicit instruction, students are placed into groups. Importantly, these are not random groups, but rather strategically chosen so

you have a mixture of questioners and answerers. Within these groups, students can ask any questions they have about the learning and the task. The routine is called triage because the students decide whether the group can answer the question or if the teacher is needed. They also need to decide if it is something the teacher needs to answer, then if it is something the whole class would benefit from, or is it an individual need? We teach this process, so the students understand the different types of questions. For a student level question, it must be something that doesn't require a long answer as well as one in which all the members agree on the answer. For example, if a student asks, "Do we need a pen or a pencil?", this seems on its face to be a question that can be answered by the group, as it is a short answer. If everyone says, "pen", then yes, it is. But if the group has five people, one does not know (the questioner), two say pen and two say pencil, then it becomes a teacher question that everyone needs to hear. If the question was, "What is a ratio?", then the group might decide that this is a teacher question as it needs a more in-depth answer than the time they have permits. But they also could decide this is an individual answer because four out of the five group members know what a ratio is. During this time, the use of the learning space can be crucial, as co-created posters sharing the definition can be a reference point for the groups to answer. If the question was "What are the steps for converting an improper fraction to a mixed fraction", the students could get a poster you have prepared earlier off the wall use it to help the student that needs it. This student now also knows there is a reference in the room that can help them if the teacher is busy with other students. This routine gives students agency in their learning by seeking peer answers first, rather than solely relying on the teachers. The level of confidence to ask questions dramatically increased during the year, not just in the number of questions being asked but by who they were being asked by.

Everybody answers

In a single lesson, it is physically impossible in the time we have to ask every student every question. So how can we check in with every student, so that their responses help us know where the lesson needs to go? The everybody answers routine is one that can be used in two ways, but the why is always the same. Known as hinge questions, these are questions built into the lesson to ensure students are understanding what we are learning. Sometimes these will be at the beginning of the lesson so that we can ensure that students have retained enough of previous sessions for today's session to be useful. Other times, these will be during the lesson so we can check whether we can keep going or if some (or all) of the class need to

stop and go back.

In terms of implementing these questions, the Thumbs up, thumbs down, and 1, 2, 3 routines as well as the use of mini whiteboards are three different ways of implementing everybody answers. In Thumbs up, thumbs down, students are asked a yes/no question and give a thumbs up (yes) or a thumbs down (no). In 1, 2, 3 students are asked a multiple-choice question with the answers labelled 1, 2 or 3. What then happens is to ask them to get into groups that have a mixture of answers. Students then take turns attempting to convince each other of their answers. Often when you do this, you will have students change their answers. It also gives fantastic formative assessment when you hear why the students chose the answer they did. As well, it guides what is being taught next.

Mini-whiteboards are a fantastic tool when the question needs to go beyond a simple yes/no or closed answer. For example, you might be working on the make to ten strategy. You would ask students to solve $8 + 5$, but we do not want to know if they know the answer is 13, we want to know how they worked it work. The mini whiteboards allow us as the teachers to see what every student is doing. Like the Thumbs up, thumbs down and 1, 2, 3 protocols, what you do after the answers are given is the most important. Students are grouped based on their answers, not all the same answers, but a mixed group of students. Students can discuss their answers and begin to implement self- and peer- assessment.

Of all the routines included in this article, the everybody answers group were the most popular amongst my students, with almost instantaneous buy in. For the more confident students in the class, they liked the fact that they got to answer questions all the time. The less confident students also really enjoyed using them, but for a different reason. They often remarked that because everyone was answering, they did not feel like they were the centre of attention, and when questions were asked in this manner rather than through hands up or cold calling, they felt like they had more time to think. This was because as the faster answering students put their answers down, they felt the teacher could spend time looking at those answers whilst they finished theirs.

Who said it?

We talk about making classrooms student centred, giving students voice and agency in their learning. One way we can do this is by trying to never say something a student can say. For example, we show students a rectangle and ask them to explain how they measured the perimeter. The student we call on says, "I measure around the outside of the rectangle". Whilst this is the correct process, we want students to connect the process with the mathematical language

of perimeter. We could correct the student ourselves. But, to activate students into learning, we need to have them being the thinkers as much as possible. If we use this example, we need to decide on two things. One, is the student's answer the one we want to use. If yes, great we can move on. If no, we need to make our second decision. That is, is there someone in the room, either the student that gave the answer or another student, who knows the word (perimeter) that we need them to use. If the answer is no, this is a teaching moment for what the word perimeter means. But if yes, follow up questions will allow the students, with guidance, to develop the correct mathematical explanation of what we are doing. Students reported that they felt more willing to give answers because they were less worried about giving the 'right' answer.

2. Staying on task

Getting set up first.

There is nothing worse than planning a lesson we think will be engaging with hands on materials, launching the lesson brilliantly and then asking students to get into pairs and collect the necessary equipment. By the time the students have done this, they bombarded us with questions about what to do. So, the introduction is lost, especially for students with additional needs. How about we flip the structure of the lesson? When students come in, you could either verbally tell them what they need or write it on the board, depending on the age and independence of the students. Students would then get what they need and go to either their desks or the floor, depending on the requirements of the task. From there, students would listen to the introduction and any explicit teaching. This would then immediately flow into the activity, without the need for walking around the room, which limits the distraction. Another benefit that I had not originally anticipated but that came naturally was how I was introducing activities, especially games. With the activities, I could not only model them but also have students do the initial part of activity simultaneously. This was only possible because they had all the equipment ready to go. A follow on from this was partner work, especially if students were allowed to choose their own partners. This was all out of the way before the important information was delivered.

When do you pack up?

Now imagine you have finished your fantastic hands-on lesson. You cannot wait to get to the reflection and sum up with your students all the amazing learning they have done, so you ask your students to pack up and get ready for the discussion. Once this laborious

practice had ended, you complete your reflection on the lesson. However, what I sometimes is that the students had completely tuned out once they had packed away. Why was this? Well, even as adults, if we are working in a meeting and are asked to pack up, this naturally signifies the meeting is over. Our minds drift to other things, even if the presentation is still going. It is the same for children. A simple but effective tweak is to use the pause-reflect-pack up routine instead. We are going to pause the lesson, go through our reflection and then pack up. If distractions are an issue, you could conduct your reflection in a separate part of the floor.

Group work – who gives the answer?

One of the downsides of working groups, be they partners or small groups, is knowing who is doing the work? If we go down the path of similar attainment groups, we have a percentage of groups that are going to struggle with the task. However, if we use mixed attainment groups, are the higher attaining students doing the work? How can we overcome this? A routine that can be used is to select the student who is going to present the results from the group. This is often not the highest attaining student, and this is by design. If you have a student who you think might tune out or not be as engaged as they could, this is the student that you select. This means, if you are the one in the group who knows the answer, it is now your job to teach your group members well enough for them to be able to explain it to the rest of the class. Students felt when working with this routine, that it felt more like working as a team. They compared it to other 'group work', where they felt like a few students would just do the task themselves, "because they knew what they were doing." With the rules around who answers, they felt that everyone had to be involved, or at least supported, because everyone had to be able to answer the question.

Conclusion

I hope the seven routines in this article will help teachers in supporting students to stay on task, in particular when working in groups and with equipment, and to make them more actively engaged in the classroom.

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References

William, Dylan (2020), 'Providing feedback that moves learning forward,' Youtube.