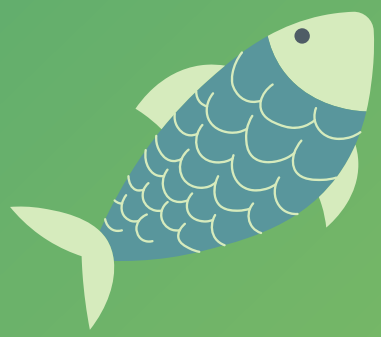
Differentiation in the Classroom: Your Ultimate Guide

3P Learning

“If you judge a fish by its ability to climb a tree, it will live its whole life believing that it is stupid.”



Every student is different. We've always known this but teaching in a way that accounts for lots of different learning styles in one classroom has often seemed inaccessible.

After all, there's only one of you and 30 of them. How can you find the time to craft learning experiences as unique as each of your students?

One word: Differentiation.

The general definition of differentiation is the ability to recognise or ascertain what makes someone (or something) different. In education, differentiation is about actively identifying individual differences in learning progress and using this understanding to inform the creation of lesson plans, activities and classroom objectives.

We're not going to lie and say differentiation is an easy, fix-all solution. It requires a strong grasp of both assessment and instruction, and a dedication to understanding each of your learners' unique strengths and weaknesses. But, when done right, differentiation in learning has a proven positive impact.

In fact, a three-year study conducted by Canadian scholars (Rock, M., Gregg, M., Ellis, E., & Gable, R. A., 2008) found that differentiated instruction consistently yielded positive results across a broad range of targeted groups compared with the general student population.

We want to make sure anyone interested in differentiation has a solid foundation to build on. So, we wrote this eBook. Here's a glimpse of what we'll cover. Feel free to jump around to the sections that most interest you!

- What is Differentiation?
- The Benefits of Differentiation
- Why Teachers Might Not Differentiate
- What Differentiation Is and What It Isn't
- What Does High Performance Look Like?
- The Differentiation Continuum
- What Can You Actually Differentiate?
- Differentiation in Literacy
- Differentiation in Mathematics
- Differentiation in Science
- Final Words: The Golden Rules of Differentiation

Let's jump right in!

What is Differentiation?

Let's start with the most basic question:
What even is differentiation?

Differentiated teaching, at its core, is about ensuring knowledge and skills are reaching all students regardless of starting point or learning ability. The aim is to ensure that all students, whether they are performing at, below or above the expected level, are given the best opportunity to make the greatest possible progress.

Providing appropriate learning experiences for every skill level is achieved by responding to student differences in readiness, interest and learning profile.

Let's break those three areas down.

- **Readiness:** Defined as the capacity to learn new material, a good task for a student's readiness level will stretch a student's knowledge past their independence level. Often referred to as the Zone of Proximal Development, this may take a student out of their comfort zone, but new material can be successfully acquired in a supported environment.

- **Interest:** Different students will show interest in different topics throughout the school year. The idea of differentiating through interest is to hook a student on an area of study to keep their interest, which typically increases on-task behaviour and improves the learning outcomes.

- **Learning Profile:** Due to physical, intellectual and emotional differences in students, additional provisions may be required to enable students to participate. This may include physical support such as hearing devices, enlarged print and access to technology; academic support such as scaffolds, reduction of cognitive load and modified task expectations; and emotional support such as managing anxiety, limiting sensory overload and making changes to the working environment.

With the help of assessment strategies, teachers monitor the above areas and then apply targeted interventions as components of differentiation.

It's not a new concept, though it has been refined considerably over the years. We can trace differentiation back to the days of single room classrooms where one teacher would be in charge of the education of kids ranging in age, skills and interest.

Differentiated instruction is increasingly important in the age of inclusive education. We, as teachers, have more diverse classrooms than ever before — from students with learning difficulties to exceptionally gifted learners. Differentiation enables teachers to respond to these differences on an individual level while maintaining a cohesive classroom with shared goals.

The Benefits of Differentiation

If you can't already tell, we are big proponents of differentiation. There are a lot of benefits that support the ultimate bottom line for educators everywhere: A better learning experience for all students.

Here's a highlight reel of how differentiation can benefit your classroom.

Students are appropriately challenged

Far and away, the first benefit teachers mention is the ability to meet every student at their own level. This is proven to increase student success. When the learning material is differentiated, each learner gets to work on content that suits their readiness level.

High achieving students aren't bored, struggling students aren't frustrated and on-pace students aren't neglected. It's a winning scenario for everyone involved.

Lessons are learner-centric

When you teach to one level, class activities can be a serious pain point for students. Feelings of being left out or not considered are prevalent, discouraging the learners from engaging.

When differentiated instruction is leveraged, everyone can genuinely participate. Mixed-level groups can be a great opportunity for peer-to-peer coaching and discussion skills in a low-pressure environment.

Class activities are truly inclusive

Differentiated instruction is learner centric. In fact, the teacher often learns along with the students. Content is relevant and interesting to each student.

Each student's voice must be actively encouraged. And the classroom needs to be a safe space for learning and — inevitably — making mistakes. Once these principles are established, self-directed learning becomes less of an unattainable goal and more of a reality.

Children are encouraged to own their education

When we differentiate through interest, we offer options based on areas students already care about. This promotes ownership of learning. When learners realise that they can explore subjects they're passionate about, they become much more invested in their own success.

Enabling this kind of interest-led study helps create students who are passionate about education and will (hopefully!) result in life-long learners.

Why Teachers Might Not Differentiate

For all its benefits, there are definitely challenges when it comes to differentiation.

Here are a few reasons why teachers might shy away from this learning approach:

1. You have a big class

The bigger the class, the bigger the challenge. It can be overwhelming to think about providing individual learning experiences for 30 students. So, many teachers solve the problem by creating streamed ability groups, often creating even more problems in classroom management and lesson preparation. This type of grouping can also have a negative impact on students at all levels, building a fixed mindset that can be hard to reverse.

2. You can't get support from above

When differentiated instruction is in action, it can look a lot like chaos. While this mayhem is always organised, to the traditional eye it might be alarming. Often, teachers are up against leaders who believe in quiet classrooms and orderly students. This can make garnering support for more differentiated approaches a bit of an uphill battle.

3. Pressure from above

Other teachers may be in a situation where there are unrealistic expectations for differentiation coming from above. This may be an expectation that each student requires an individual learning plan or unrealistic demands on providing written evidence of differentiated learning. This type of administrative load can be detrimental to actual classroom practice.

4. You have no budget to work with

Differentiated learning relies on having different options available for the full range of students in your classroom. As an example, some students may learn better when interacting with e-learning platforms on a computer or tablet, others may work better with written materials like workbooks and practice sheets and some may require the support of an aide or support worker.

While you can achieve some level of differentiated instruction without any dedicated resource, it will be most impactful the more you can invest in varied content, media and materials.

5. You don't have time to plan

As with most things worthwhile, differentiated instruction takes time. You need to have dedicated periods to individualise planning which can be a tricky feat when you already have a demanding schedule. Time management is a big one here and you'll likely need a few chunks of uninterrupted time a week to maintain your objectives.

At the end of the day, every available teaching method has pros and cons. It's our job to decide when the benefits outweigh the hurdles. In our opinion, differentiation is worth the obstacles.

What Differentiation Isn't and What It Is

Although there is a wide variance in the definition and implementation of differentiation, let's be very clear about some misconceptions...

Differentiation is NOT . . .

Exclusively for Outliers

We talk a lot about not teaching to the middle, but this doesn't mean differentiation is only for learners on the extreme ends of learning. Emphasising the middle is about highlighting that past approaches were hyper-focused on appealing to the average learner.

Differentiation is about appealing to **all** learners. Every student can benefit from being on the teacher's radar and from seeing evidence that the teacher understands their development and plans with their success in mind.

Chaotic

When educators think of implementing a flexible class structure, they often fear losing control of the classroom. The image that comes to mind is chaos: children doing what they want, when they want, with no real structure.

Carol Ann Tomlinson, American educator, author and speaker, is known for her work with techniques of differentiation in education. In her studies, Tomlinson found that, if anything, teachers utilising differentiated instruction tend to exert more leadership in their classrooms, not less. And, student behaviour is considerably more focused and productive.

'Individualized Learning'

The idea of creating 20 – sometimes 30 – individual plans would be daunting to even the most seasoned educator. While differentiation does offer more than one avenue to learning, in most classrooms it does not necessitate a separate set of assignments for each student.

Differentiated instruction is modelled on the approach of a one-room-schoolhouse – that every classroom (despite arbitrary streaming by date of birth) is a multi-age, multi-ability classroom. Teachers with different ages and skills in one classroom recognised that sometimes it was necessary to work as a class, other times small groups were best suited and on occasion one-on-one instruction was needed. The blending of these three approaches created a sense of community while also advancing individual skill sets.

Differentiation IS . . .

Dynamic

Teaching is evolutionary in a differentiated classroom. Teachers are constantly learning about their students and students are constantly learning about the subject matter. Every hour of the day presents an opportunity to find new inspiration. The more you learn about your students, the better you can vary lessons to suit their range of learning needs.

Proactive

When teachers take a one-size-fits-all approach they often need to make reactive adjustments as soon as they see a lesson is not working for some of their learners. Conversely, in a differentiated classroom, the teacher assumes that different learners have varied needs and proactively plans lessons that provide meaningful learning opportunities for all students.

Rooted in Continuous Assessment

Assessments are not used as an end-of-term check-up nor are they ditched completely. Rather, in a differentiated classroom, assessments are ongoing — informing the shape and direction of current and future learning. The key difference? Not all assessments are fixed measures of student achievement. A lot of assessing is about understanding the student, where they're at and what they need to keep improving.

The Differentiation Continuum

While we all love to think we can jump in headfirst to every new method that comes our way, it's not really possible. Those hard-and-fast approaches usually end in burn-out. Depending on the structures already in place at your school, you may feel highly supported or completely on your own.

If you need support to ease you into the process, this continuum of implementation may be helpful.

Stage One: Early Implementation

Differentiation always starts with assessment. Make time to learn about student interests, make note of skill levels, hand out formative pre-assessments and begin building out learning profiles.

At this point, it's important to set classroom management procedures so students know what to expect. Start to introduce flexible grouping and add some student choice to activities. Scope out what challenges you see and how you will plan for them.

Stage Two: Intermediate Implementation

At this point you'll have learning profiles ready for the classroom and you'll be able to begin designing activities to target student interests and readiness levels. This is a good time to leverage the data from your pre- and formative assessments to guide instruction.

Make sure to include anchor activities that involve the whole class during this period. You want to introduce differentiation without losing the sense of class community.

Stage Three: Full Implementation

You and your class are beginning to get more comfortable with differentiation. It's more natural to target interests and learning profiles. Remember to continue to use data from pre- and formative assessments to design lessons and guide instruction.

You should be ready to experiment with tiering at this point and even get a bit more creative with your flexible grouping.

Stage Four: Advanced Implementation

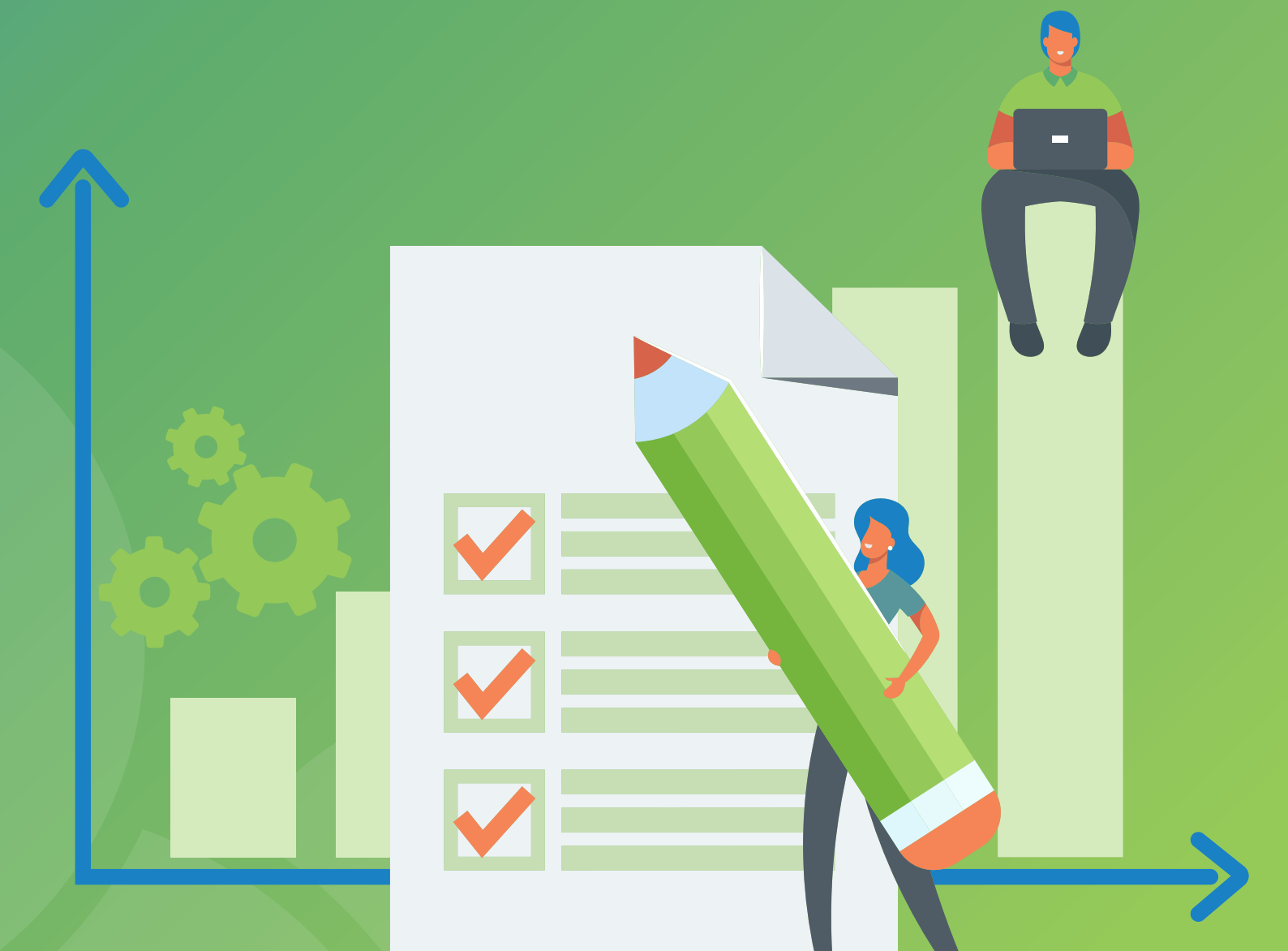
You're ready to start compacting the curriculum for certain students and aligning assessments with your learning profiles. You really feel like you're sharing responsibility of learning with your students and you're seeing them progress.

It's time to spread the knowledge with your colleagues. Let them know what you've seen as a result of differentiation and offer help if they're interested in trying things out.

What Does High Performance Look Like?

The continuum gives us a baseline for what implementation should look like. But we know that just because you apply something does not necessarily mean you're doing it well.

When it comes to differentiation here's what the pillars of performance look like on a broad level.



High Performance

- School leadership actively encourages differentiated instruction
- Differentiated vocabulary is regularly used to describe teaching approaches.
- Assessment instruments are used regularly to pinpoint learning levels and skill gaps.
- Teachers are encouraged to proactively respond to cultural differences through varied means of representation and expression.

Medium Performance

- School leadership acknowledges the value of differentiation but does not actively support this approach by providing resources.
- Individual teachers must take the initiative to assess students on their own time.
- Differentiated teaching is used at random with no clear direction or dedication.

Low Performance

- School leaders do not mention differentiated learning.
- No time is allocated for assessment of individual learning needs or skill gaps.
- Teachers are expected to teach to the middle of the class with the understanding that some students will not achieve mastery and others will finish early.

What Can You Actually Differentiate?

Just like it's important to understand what differentiation is and what it' is not, it's key to know what can and can not be differentiated. The line between can and can not is oftentimes blurred.

So, let's take a closer look.

Differentiation of Content

We are defining content here as the knowledge, understanding and skills students need to learn. Content can vary greatly in its delivery, scope and complexity.

We can differentiate content delivery by changing the way students access it. Some students might retain information better by reading text and distilling it into a report, others see better results when they work in small groups and discuss key concepts. Scope and complexity can be adjusted to ensure students are working in their Zone of Proximal Development – not too easy, not too hard. Keep in mind though, that when a student is working on a topic that is highly interesting to them, they may break the boundaries of their previous achievement

Differentiation of Product

Products represent the way students show us what they have learned after a lesson. Tomlinson refers to this as an authentic assessment. Essentially, students have free range on how they demonstrate their learning to us. This is differentiation at its core. Our learners are free to do what best suits them as long as they showcase they have retained the overall learning objectives.

Differentiation of Process

This is a big one. Process is how students come to understand or make sense of the content. It's all about practice based on the core learning objective. Students need space to work things out, get curious and make mistakes. According to Tomlinson this is where educators often see the biggest levels of differentiation.

"Almost always students will need to work at different speeds, with different kinds of support, in different groupings, and in different modes," explains Tomlinson, "And that's a very important stage because this really is the point where learning happens with kids."

Differentiation of Affect

Affect refers to the ways a students' emotions and feelings about their learning impact the outcomes. When we want to differentiate affect, we need to alter the learning environment to facilitate a student's emotional needs.

For example, one of your students might excel when given praise, another might shy away from attention. You differentiate by accommodating these differences in personality. Student A gets a shoutout in front of the class, Student B gets an encouraging note written on the last page of their test.

Differentiation of Questioning

Questions don't need to be rigid. While some students respond well to straightforward questions, others have an easier time getting to the answer with a more open-ended query.

Differentiated questioning is about using a range of questions ensuring everyone's preferences are met.

Differentiation of Feedback

Differentiation of feedback requires a certain level of trust and mutual respect but once that is achieved it can be very useful. This involves real-time feedback from the teacher. You reveal answers to questions as students are working. From there, each student can gauge where they're at and take the next steps in accordance with that. Whiteboards are great tools here. You can help those who are struggling with a whiteboard demo while giving students confident in the subject a worksheet to tackle simultaneously.

Differentiation in Action

We know the what the why and the how of differentiation as a teaching principle.
But what does it look like in practice?
Naturally, differentiated learning will take varied forms based on the subject matter at hand.

Here is a glimpse at how things play out across literacy, science and math.

Differentiation in Literacy

As our classrooms become more diverse, approaches to teaching literacy become more complicated. In a given classroom, the range of skill levels can be considerable. From students learning English as a second language to learners with reading deficiencies - educators need an approach that can cater to these different levels while aiming for the same objectives.

Enter: differentiation.

How to differentiate in Literacy

As with any subject, differentiated instruction in literacy starts with an assessment. You need to understand what you're working with. From there you can create some options for differentiated approaches. Here are a few examples.

Example One: Book Learning Contract

Your student tells you that she is super interested in learning more about Maya Angelou. Together, you decide how she'll research her and how she'll present her findings and by when. Then you'll draw up a contract and your student will be on her way.

This approach allows your students to work at a pace that suits them but is also realistic while enabling them to learn more about something they really care about. This ultimately teaches independence in learning and helps your student build out self-driven planning skills.

Example Two: Tiered Comprehension Assignment

You assign a short book to your class for reading. At the end of the book you ask students with moderate comprehension skills to draw out a story web with the main events. Learners with advanced comprehension skills are asked to retell the story from the point of view of another character.

Tiering your assignments allows you to instruct your classroom on the same skill but with different levels of complexity. The end result is a demonstrated understanding of the story but the product is varied.

Example Three: Interest Centres

You're working on vocabulary skills with your class. Instead of handing out a list of words and asking them to memorise them, you build out four interest stations: cartoons, sports, animals and planets. Each station involves activities that incorporate the vocab words in the context of the theme. Students pick which theme they want to work with.

Centres or groups based on interest are intended to target areas that learners already care about. Giving your students the option to choose is often motivating and can result in an increased investment in the project at hand.

Differentiation in Mathematics

Compared to other subjects, mathematics is often seen as extremely rigid. More often than not, mathematics teachers will present a relatively narrow curriculum goal from the textbook, observe who needs help and then try to provide one-on-one support as much as possible.

Differentiation in mathematics can be extremely effective. When teachers take different products, processes and interests into account, engagement with mathematics materials tend to increase.

How to Differentiate in Mathematics

Student readiness, preferences and interests are big players here. Mathematics equations are more or less black and white but that doesn't mean the way you teach has to be. Creating more open-ended questions, building in topics of interest to your lessons, giving your students choice — these are great tools to consider when differentiating learning in mathematics.

Example One: Determining Polygon Perimeters

Today's lesson is about polygons. You need to find a way to get your students to more actively engage in measurements. Instead of asking them to calculate perimeters on a piece of paper, you make the learning meaningful to their interests. Provide real-life objects or 'to scale' images of a range of mobile phones. Use the problem of determining which mobile phone has the largest perimeter to add engagement to the task. Or allow them to choose other related objects (books, computer screens) and measure their perimeters. Students can work independently or in pairs to add choice to the task.

This active element increases engagement in the activity and their ability to choose piques their interest levels.

Example Two: Similarities and Differences

Pick two shapes. Ask your students to call out similarities, differences and observations. These kinds of questions appeal to a broader audience. There is less black and white which encourages more people to speak up, participate and build their confidence. Differentiation of questions is a big player in mathematics, and you might be surprised by how asking things differently encourages your class to get involved.

Example Three: Volume Choice Boards

It's time to learn about fractions. You have provided clear and explicit instruction to the whole class or small groups. Then you create a choice board with a bunch of different activities that help your students become more fluent in their use of fractions. One option involves pizza slices. Another involves an interactive computer game. There are options for a wide range of applications and contexts. You ask your students to pick two and complete them by the end of the week.

Differentiation in Science

By nature, science takes a lot of forms.

You can be doing hands-on experiments or completing long worksheets. Differentiation in this subject requires a little imagination and a lot of organisation.

How to differentiate in Science

When we approach differentiation in science, our best tools are product and process. We can vary how students receive information and give them flexibility on how they showcase what they've learned.

Example One: Approaching key terms

Science vocabulary can be daunting. Most of the time, before you can even approach practical examples, you need to really digest a page of terms. Based on earlier assessment, teachers can provide two versions of unit readings. For students who might need a little extra guidance, offer up readings with key terms bolded so they are easily located. For more advanced students, hand them the reading as is.

Example Two: Project Rubrics

When approaching projects, offer students the option of rubrics. Students who feel confident in the directions given can run free and lay out their project as they see fit. Learners who like a bit more structure can grab a rubric with clear criteria to hit so they know the exact path to follow.

Example Three: Same Task, Different Option

For better or worse, we all remember dissection day in life sciences. For some, it's a memorable experience; for others, one they'd rather forget. This is where options are critical. You don't need to force students to participate in something that may turn them off from science for the long haul.

Give your students choice, maybe you offer 3D models, maybe there's an online tutorial, for others dissection is what they want. Let them choose and watch engagement increase.

Final Words:
The Golden Rules of Differentiation

Bottom line: Differentiation in the classroom is an important skill for teachers to give students the best chance at learning, regardless of their abilities, strengths and weaknesses.

1. Differentiation is about working with the strengths and weaknesses of your class in a way that lifts up each of your learners.

2. Differentiation is not always easy. It requires a lot of strategic planning, a willingness to change course and a deep understanding of your students. (It's worth it.)

3. Differentiation looks different depending on the topic. Some subjects give you endless range, others have a small margin for variation.

4. Learning objectives are your north star. You can change the way your students receive, process and communicate knowledge but not the learning outcome itself.

5. Differentiation is not all or nothing. You can test out this style for one subject, one lesson plan or for one class. See what works, change what doesn't but most importantly enjoy the journey.

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