# Science & Year 7- Consolidation and skill building (firm foundations)

## Curriculum core purpose. Intent

**How does this curriculum fit into the OBHS Curriculum Specification?**

Science is a core subject and students have to study science at GCSE. Therefore year 7 is the first step in a 5-year learning journey that spiral to conclude in GCSE examinations.

Students have already started their journey in primary school, however we know that a students come into OBHS with a wide variety of experiences, partially around the teaching at KS2 where often science is condensed, reduced or missed for SAT's and teacher lack of teacher specialist training. This means that students often come in with a large disparity between their current ability and their projected progress taken from English and maths average results. Y7 science is about addressing these gaps and ensuring that all students arrive at the end of the year having a firm foundation to progress into their year 8 learning.

During year 7 we also address working skills such as revision skills, digital literacy and safer internet skills, in addition to linking learning with every day events and topical questions (for example plastics and recycling). Discussion and ethical reasoning (literacy skills) pays an important part to this year.
There are also specific modules such as Human reproduction, variation (genetics) and universe that support elements in the PSHE curriculum. These are highlighted in the school documentation.

## Population design rationale

**How are your classes structured to meet the needs of students?**

When students start in Y7 they are initially set in mixed ability groupings based upon their Base groups. This grouping remains until Christmas and the first data harvest. We understand that moving schools can be daunting experience for some students and we want to support students to form strong friendships and support networks during this critical time.

Meeting SEND
Meeting PP

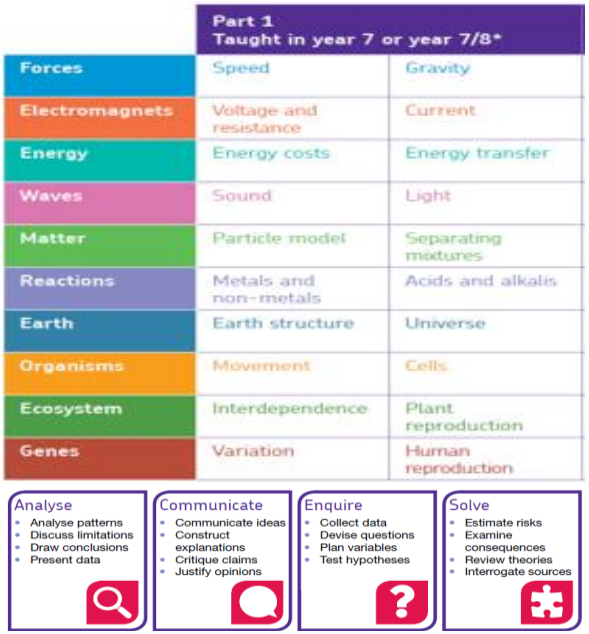
Or mitigation strategies if you do not have control over population design – What are you doing in the lesson – where does the personalisation come in -

Explain where the pre-option comes in -

In January, Students are stranded into sets, based upon the Starting point assessments in the Autumn term. We have chosen to use a stranded approach to setting to enable students of all abilities to see higher level work, and to aspire to raise their expectations. We cite Vygotsky's zones of proximal development as an underpinning concept of design, allowing students to share skills and knowledge to drive progress. Students remain in the same stranded set for the reminder of the year.

## Content-Knowledge and Skills.

Students undertake the first year of a 5 year spiral curriculum that mirrors the delivery in KS4.
Big ideas are introduced to learners as key concepts that are revisited in the 5 year journey.
Key skills are introduced that are continuously practiced (e.g. drawing line graphs or interpreting data)




## Subject specific pedagogy

Unit specific scientific glossaries are included in all booklets. These are used to practice vocabulary and are highlighted when used in students work.

The narrative journey is included as a lesson sequence showing progression of unit and the linked learning objectives, to support self-assessment.

Practical skills are embedded throughout the sequence of lessons. The scientific method is endorsed through regular practical engagement with literacy aims to mirror those used at KS4.

Scientific mathematical skills are embedded where required. This includes the evaluation of provided data.

## Resources and support

Access to online textbooks. Seneca learning used as revision aid.

Access to a wide range of practical's with differentiated worksheets and outcomes to meet their needs.

Use of textbooks tailored to the class.

Checklists have access to full range of levels with students 'choosing' working level.

## Feedback, assessment and progress.

***How are students assessed? How does this demonstrate progress?***
Students are assessed at the end of the 6 week module via a 30 minute (60 mark) exam. The assessment takes place under exam conditions in the teaching class rooms.
Students work is formatively marked and next steps added to help them progress. Students are expected to respond to ideas in green pen. Additionally skill specific DIRT sheets have been developed to feedback and practice key skills such as graph drawing and planning a 6 mark question.

## Habits

**Year 7:**

**Resilience** – proof reading, responding to teacher feedback, applying Next Steps to new contexts;

| | |
|---|---|
| Lesson assessment and structure is routinely organised into hierarchal levels of understanding and competence. These are identified at the start of the topic and referred to during and after during DIRT exercises. They use these to self-assess and show ambition to reach the next level.<br><br>***How do children receive feedback on their learning?***<br>Feedback is given both verbally and written, following school marking policy. End of topic tests are followed by DIRT/therapy sheets that allow students to identify their own points for improvement and are supported by teachers to close these gaps. Assessment of flip learning homework/ Aspirational extension is by low stakes quizzing – three questions at the beginning of the lesson.<br><br>***How is feedback used to inform planning/ SoL?***<br>Feedback dictates the learning narrative, lowing us to fill existing foundation gaps and to explore wider topics with engage and inspire students. | **Collaboration** – participate actively in-group discussions, develop active listening skills, and begin to experiment with roles within groups. |