

## Science - Support of SEND and Disadvantaged students

### **CURRICULUM GOALS**

1. To ensure that all students with SEND and disadvantaged students can access the Science curriculum and achieve mastery in line with their peers.
2. To provide support by differentiating resources which motivate and encourage SEND and disadvantaged students to achieve success.
3. To always have high expectations of disadvantaged students and those with SEND.
4. To raise the aspirations of SEND and disadvantaged students by providing them with opportunities to broaden their outlook on careers in Science.
5. To support the school- wide literacy and numeracy programme.

### **General strategies, ideas and resources for both disadvantaged students and those with SEND**

- Seating plans to provide a suitable partner to work with and easy access for teacher to assist
- Books marked regularly and selectively (not correcting every error) with clear formative feedback and encouragement
- Larger/ coloured printing of resources as indicated by strategy guide.
- Tier 3 vocabulary lists provided for each topic which are made reference to during teaching
- Clear instructions, broken down and scaffolded.
- Check understanding of disadvantaged and students with SEND first.
- Make full use of the differentiated resources provided in course text books and workbooks at all levels.

### **Provision in Science to support students with SEND and disadvantaged students**

#### **In the following areas:**

#### **Reading and comprehension**

- Lessons in years 7-9 are provided with 10 minute reading opportunities about their current topic, famous scientists or careers in science to support those with low reading ages.
- These 10 minute reading sessions are a mixture of independent reading or partner reading, where text is differentiated, or Teacher/students read out loud (Student reading out loud is on a voluntary basis). This allows all students with low reading ages to access regular reading opportunities without being withdrawn from the lesson.
- Text books and print outs are checked to ensure they are of an appropriate reading age for individual students and are adapted accordingly by using numbered lines or highlighted areas in text to make answer easier to find
- Readers provided for those on the KS3 Access Arrangement list during assessment lessons.
- For years 7-9 a comprehension homework is set every 4 weeks and although the text is differentiated for students with SEND the questions are the same for all students to ensure high expectations and to build self-esteem.

#### **Development of Science vocabulary**

- Tier 3 vocabulary words are broken down using phonetics to support those with SEND.
- Provide key word lists for each topic for students to stick in their book so they can refer to it repeatedly to aid spelling and understanding of key words and to support written tasks.
- Whole class repetition of key words to allow auditory processing as well as visual processing.
- Visual cues accompany key words, sentences or text to aid recognition of word and meaning for those students with poor memory or dyslexia.

- Use acronyms to aid spelling and meaning of key words for those with a literacy SEN.
- Use word roots and visuals to support meaning for those students with weak literacy and/or poor memory.

### **Numeracy support**

- We provide mathematical equipment to support disadvantaged students
- In years 7-9 a numeracy assessment will be set for every topic which will be differentiated for those with weak numeracy skills and examples are given to support task.
- Large protractors are available for learners with gross motor issues to support them when measuring angles (topic of light) and use adapted calculators with large keyboards.
- Model step by step calculations either on the board or use a visualizer and provide students with a copy of the method to refer to. Go to disadvantaged students and those with SEND first to check understanding.
- Ensure repetition of calculations at every opportunity in order to develop mastery for all students with SEND.

### **Graphicacy**

- When drawing graphs the teacher uses a visualiser to support students who struggle to draw scaled axis.
- Pre-drawn templates are given to students who need extra support with graphs and support is slowly withdrawn as mastery is accomplished.
- Repetition and exposure to graphs and tables is key to embedding this key skill and ensuring mastery is achieved by all.

### **Physical needs e.g dyspraxia**

- Purchase special equipment for use in practical lessons to ensure inclusion such as special stools writing slopes, rulers with grips.
- Position in class is key for some students with physical needs and they support the class teacher in this decision making

### **Students with EHC plans**

- For those students with complex physical needs a practical assistant is provided to ensure inclusion for students with SEND.
- Desired outcomes of EHC plan are shared and appropriate support is put in place according to individual student need, for example seating arrangements within the classroom.
- If TA support required a Science TA is provided to fulfil outcome.
- Teacher checks student understanding first and gives verbal feedback to encourage student participation.