

## The STEM curriculum

### STEM curriculum vision

*Science, technology, engineering and maths are the building blocks of the future. The most successful companies in the world are built on them, and our students benefit from STEM inventions every day. At Barr's Hill we equip our students with the fundamental skills they will need for a forward-looking career.*

*The curriculum begins with the fundamentals of circuits and 3D modelling. Students will design, make and evaluate models using CAD which can then be 3D printed. In Year 8 they will learn vital engineering and wood work skills as they plan to open their own online craft store. In Year 9 the students will embed intelligence into a designed probe as we look at terraforming Mars.*

### Key stage 3 – Units of study

| Term          | Year 7                                                                                                                                                 | Year 8                                                                                                                              | Year 9                                                                                                        |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| Rotation<br>1 | <i>Surviving a zombie apocalypse:<br/>Designing circuits for a beacon,<br/>prototyping a neck protector and 3D<br/>printing a rainwater collector.</i> | <i>Starting a craft business:<br/>Manufacturing a bug hotel, designing<br/>and making a phone holder, making a<br/>marble maze.</i> | <i>Terraforming Mars:<br/>Designing a probe that can land safely,<br/>Collecting data on a BBC Micro:bit.</i> |