|  |  |  |  |
| --- | --- | --- | --- |
| **Core Knowledge Map** | | | |
| Subject: **Mathematics** | Year: 11 | | Term: Autumn 1 |
| What are we learning? | | | |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Unit 10: Functions** | **Sparx IL Codes** | Sad face outline with solid fill | Nervous face outline with solid fill | Smiling face outline with solid fill | | Understand and use function notation with numbers and algebra | U637 |  |  |  | | Find and use composite functions | U895, U448 |  |  |  | | Find inverse functions | U996 |  |  |  | | Solve problems with functions | - |  |  |  | | | | |
| How will I be assessed | | | |
| Retrieval Tasks, Exit tickets, end of half-term test. | | | |
| Big questions: | | | |
| Can you….?   * Evaluate f(-5) when f(x) = 3x – 5 * Deduce if f(4) = 2, what would f-1(2) be equal to * Given that f(x) = x2 and g(x) = 4x + 1, find an expression for fg(x). * Solve f-1(x) = 0 where f(x) = 3x + 5 | | | |
| How does this build on previous learning? | | How will this link to my future learning? | |
| * Substitute into an algebraic expression. * Evaluate algebraic expressions. * Rearranging formulae * Expanding brackets and simplifying algebraic expressions. | | * Iteration * GCSE synoptic and multi-step problem solving questions. * Functions are explored in more depth in A Level maths – for example what makes a function a function? | |
| Core knowledge: | | Key vocabulary: | |
| * An **inverse function** is a function that undoes the action of another function. A function g is the inverse of a function f if whenever y=f(x) then x=g(y) * The **inverse function** of f(x) is denoted by f-1(x) * A **composite function** is a function of a function for example fg(x) where function g is input to function f. | | Function  Inverse  Composite | |
| Need more help? Use the Sparx Independent Learning Codes above | | | |