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| **Core Knowledge Map** |
| Subject: **Mathematics** | Year: 11 | Term: Autumn 1 |
| What are we learning? |
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| **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 | - |  |  |  |

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| 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
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| 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?
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| 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.
 | FunctionInverseComposite |
| Need more help? Use the Sparx Independent Learning Codes above |