

Functional Programming				Category Theory						
lev	type	name	stery	lev	type	name	stery			
0	concept	immutable data	✓	0	concept	elemental mathematical proof techniques	✓			
0	concept	second order functions	✓	0	concept	sets and relations	✓		MASTERY	
0	concept	constructing and destructuring	✓	0	concept	elemental functions properties	✓	Common	✓	Concious
0	concept	function composition	✓	0	concept	isomorphisms	✓	Uncommon	✓	Introduced
0	concept	first class functions and lambdas	✓	0	concept	elemental categories concepts	✓	Rare	✓	Learnt
1	concept	algebraic data types	✓	1	concept	monoids	✓	Epic	✓	Practiced
1	concept	pattern matching	✓	1	concept			Legendary	✓	Mastered
1	concept	parametric polymorphism	✓	1	concept					
1	concept	general recursion	✓	1	concept					
1	concept	referential transparency and totality	✓	1	concept					
1	concept	higher-order functions	✓	1	concept					
1	concept	partial application, currying and point free style	✓							
1	concept	type classes	✓	1	concept					
1	concept	lower order abstractions (equal, semigroup, monoid, etc.)	✓	1	concept					
1	concept	laws and property based testing	✓	1	concept					
2	concept	generalized algebraic data types	✓							
2	concept	higher-kinded types	✓							
2	concept	rank-n types	✓							
2	concept	folds & unfolds	✓							
2	concept	higher order abstractions (category, functor, monad)	✓							
2	concept	basic optics	✓							
2	concept	efficient persistent data structures	✓							
2	concept	existencial types	✓							
2	concept	embedded dsls using combinators	✓							
3	concept	codata	✓							
3	concept	(co)recursion schemes	✓							
3	concept	advanced optics	✓							
3	concept	dual abstractions (comonad)	✓							
3	concept	monad transformers	✓							
3	concept	free monads and extensible effects	✓							
3	concept	functional architecture	✓							
3	concept	advanced functors (exponential, profunctors, contravariant)	✓							
3	concept	embedded dsls using GADTs, finally tagless	✓							

