SCRIPTING / LANGUAGE LEARNING IN GENERAL

How to learn a new scripting or programming language quickly and efficiently (Perl, Python, PL/SQL, Bash, etc...)

1. **What is the lexical structure of the language?** how are statements delimited, how are comments separated from code?
2. **What are the built in data types?** How is an integer, character, string, real number represented?
3. **What are the syntactic terms of the language ?**  How are variables declared?  What are the operators for arithmetic ? are there differences between the way variables or constants are declared?  How is quoting handled? Are there data types for lists, arrays, dictionaries or do you have use a library or API?  Does context of a statement matter?
4. **Does the language have built in support for regular expression matching?**  how does it work?  are there limits? is it different from other languages approach to pattern matching?
5. **What are the operators used?**   Are they used on the left hand side of the expression or the right hand side of the expression?   Is there a priority as with arithmetic?   Look for assignment = , sum, multiply, divide, subtract, relations (greater than, less than, equal to), conditions (if then else, case)
6. **Statements and Declarations** - how do you create a statement or a declaration in the program?  How is one statement separated from the next?   What about simple statements and compound statements?  How are loops declared?  How are blocks declared?   What is the scope of declarations (e.g. global, local to a subroutine or a block?)
7. **How are subroutines declared?**What information is hidden within the declaration?   how are parameters passed?  how is the subroutine called inside a program?  are parameters passed by value or by reference?

Once you master this you need to dive deeper and find out about

* How do you read or write to a file
* What APIs / Libraries are installed in our ordinary builds.
* How do you access a database (esp. Oracle)
* How do make a call to a web service (RESTFul APIs)
* Are there special features of the language that are unusual (Perl has FORMATS as an example)
* Are there special variables associated with the language (Perl is rotten with these)