Question 1: What is the difference between a struct and a class?

A struct is pretty much a public version of a class. Like by default a struct is publicly accessible, where as a class is private.

Question 2: What are function declarations?

A function declaration is where you create a function and let the program know that it exists and what sort of parameters it takes, for example you could like define “int details(int age, int height)” and so on. The decleration will have 0 functionality besides that though, the rest of the code would go in the body.

Question 2.1: Why and when are they are needed.

You usually use function declaration to initialize it before its actually called, and you could also use them in header files so that they can be used across multiple cpp files.

Question 3: Why are variable names not needed here?

The function parameters don’t really need variable names here because the actual name of the function does a good job at defining what it is, and is self explanatory on the sort of expected integer inputs.

Question 3.1: Could you add variable names? Would that be good?

Yes you could add variable names here, and personally I would add them, because good documentation makes coming back to code so much easier. Not really an exact answer to this example, but in general when coding in larger projects, it can get pretty tough to remember what each variable is actually for, so naming them will help a lot down the line.

Question 4: Does your IDE know if this method is used? If yes - how does it indicate this? (Colour? Tip? Other?)

Yes the IDE does know when the method is used or not, it usually chucks it a little green line when its not being used, and usually when you hover over it, you can see that it says “function definition has not been found”

Question 5: un-initialised values ... what prints and why?

It prints nothing because “a” is not initilised, my compiler was giving me an error, and to fix this I had to initialise a first by changing line 89 to “Particle a = {0}”

Question 6: Did this work as expected?

Yes it did.

Question 7:

Question 8:

Question 9:

Question 10:

Question 11:

Question 12: