# Part 15 changes to the VLE materials

Note:

There are several points in the materials where you are warned that the relevant notebooks may take several hours to run. This is no longer the case: the exercises and the supplied VCE have been adapted so that the lengthy tasks have been replaced. In testing, all of the provided notebooks run in no more than a few seconds on the remote VCE, and on any reasonably modern desktop or laptop computer.

The remainder of this document describes the changes that will be made to the Part 15 VLE materials so that they align with the notebooks.

**In section Workload:**

Change the main text to read:

This is an intensely practical, hands-on part, centring on six substantial Notebook activities.

* Activity 15.1 uses Notebook 15.1 Mapping accidents and notebook 15.2 Searching within a geographical area (90 minutes).
* Activity 15.3 uses Notebook 15.3 Introducing aggregation pipelines and 15.4 Grouping and summarising operations in aggregation pipelines (120 minutes).
* Activity 15.4 uses Notebook 15.5 Introducing the roads collection (45 minutes).
* Activity 15.6 uses Notebook 15.6 Working with roads location data (60 minutes).

**In section 2 Plotting data on a map:**

Change activity 15.1 description to read:

Activity 15.1

Timing: 90 minutes

Work through Notebooks 15.1 Mapping accidents and 15.2 Searching within a geographical area. These will take you through the basics of viewing maps in Notebooks, adding markers to maps and filtering results by geographical area.

**In section 3 Building complex queries: the aggregation pipeline**

Change activity 15.3 description to read:

Activity 15.3

Timing: 120 minutes

Work through Notebook 15.3 Introducing aggregation pipelines and 15.4 Grouping and summarising operations in aggregation pipelines . You will need to refer back to Chapter 7 of [*MongoDB: The Definitive Guide*](https://www.open.ac.uk/libraryservices/resource/ebook:9781306811484/provider/ProQuest_Safari_Tech_Books_Online&f=27523) quite heavily for details of the various aggregation operations.

**In section 4 Combining datasets:**

The initial comment:

Note that Activity 15.5 below will take several hours to complete, perhaps overnight. Please plan your study accordingly.

should be *removed*.

There should then be two activities:

Activity 15.4

Timing: 45 minutes

Work through Notebook 15.5 Introducing the roads collection to get a feel for what the road data looks like.

and:

Activity 15.5

Timing 60 minutes

Work through Notebook 15.6 Working with roads location data to examine how dangerous different road sections really are.