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1. What is the name of the qualification?

The name of the qualification is *Data Science*.

2. What type of qualification is it?

The qualification is a [National Progression Award](#).

3. What is the level of the qualification?

The qualification is available at **three levels**: [SCQF](#) Level 4, 5 and 6. These are equivalent to National 4, National 5 and Higher.

4. What is the full title of the qualification?

The full title of the qualification is: *National Progression Award in Data Science at SCQF Level 4/5/6*.

5. What will learners get from it?

[Data science](#) is becoming a vital part of the modern world. There is a shortage of trained data scientists. Data skills are also important at university and in everyday life. Learners will find out what data science is used for,

the principles behind it, and gain practical skills in analysing large datasets. They will be able to apply these skills in their personal lives, at university and in employment.

6. Where can learners progress to?

The qualification is available at three levels, so an obvious progression is from one level to the next. The Level 6 (Higher) award is demanding, and delivers fairly sophisticated skills in data science – more than adequate for progression to university. If learners want to specialise in data science they could consider a Modern Apprenticeship or degree.

7. What is the award code?

The award codes are:

GP8N 44	NPA Data Science at SCQF Level 4
GP8P 45	NPA Data Science at SCQF Level 5
GP8R 46	NPA Data Science at SCQF Level 6

8. What is the size of the qualification?

At Level 4 (National 4) the qualification will take **80 hours** to deliver. At Level 5 (National 5) and Level 6 (Higher) the qualification will take **120 hours** to deliver.

9. What is the structure of the qualification?

The Level 4 award consists of **two mandatory units**; Levels 5 and 6 consist of **two mandatory units and one optional unit**.

Level	Mandatory units	Optional unit
4 (National 4)	J2HN 44 Data Citizenship J2G2 44 Data Science	
5 (National 5)	J2HN 45 Data Citizenship J2G2 45 Data Science	HY2C 45 Computer Programming J2GT 45 Data Science: Project J2G8 45 Data Science: Statistics H9E2 45 Data Security J2G6 45 Machine Learning
6 (Higher)	J2HN 46 Data Citizenship J2G2 46 Data Science	HY2C 46 Computer Programming J2GT 46 Data Science: Project J2G8 46 Data Science: Statistics H9E2 46 Data Security J2G6 46 Machine Learning H95Y 46 Statistics

There is a [unit specification](#) available for each unit, which defines its contents and assessment.

10. Who is it aimed at?

The qualification is aimed at **all learners**. While it is particularly suitable for learners with an interest in STEM, learning about data science is beneficial to everyone. For example, learners who plan to progress to university will benefit from learning how to analyse large datasets, which is required in the majority of undergraduate degrees. Learners do not require previous knowledge of data science. Direct entry to any level, including Level 6 (Higher), is possible for suitably motivated learners.

11. Is it a new or updated qualification?

The qualification is **new**.

12. Does it replace an existing qualification?

No.

13. Are there credit transfer arrangements in place?

No. This qualification has no predecessor awards.

14. Is there a subject page?

The subject page contains vital information about an award such as its structure and assessment. The subject page is available [here](#).

15. Where can I find the Group Award Specification?

The Group Award Specification (GAS) can be found on the [subject page](#). The GAS contains important information about the qualification such as resource requirements, entry requirements, and teaching and assessment methods. You can download the GAS [here](#) [PDF].

16. What are the contents of the qualification?

The contents of the qualification are fully defined in two documents: the [Group Award Specification](#), which defines the structure of the qualification, and the [unit specifications](#), which define the contents of each unit. The qualification covers various topics including: statistics, data literacy, data analysis, Big Data, Machine Learning and data ethics.

17. Where can I find the unit specifications?

The unit specifications are available on the [SQA website](#). Direct links to each document are provided below.

HY2C 45	Computer Programming at SCQF Level 5
HY2C 46	Computer Programming at SCQF Level 5
J2HN 44	Data Citizenship at SCQF Level 4
J2HN 45	Data Citizenship at SCQF Level 5
J2HN 46	Data Citizenship at SCQF Level 6
J2G2 44	Data Science at SCQF Level 4
J2G2 45	Data Science at SCQF Level 5
J2G2 46	Data Science at SCQF Level 6
J2GT 45	Data Science: Project at SCQF Level 5
J2GT 46	Data Science: Project at SCQF Level 6
J2G8 45	Data Science: Statistics at SCQF Level 5
J2G8 46	Data Science: Statistics at SCQF Level 6
H9E2 45	Data Security at SCQF Level 5
H9E2 46	Data Security at SCQF Level 6
J2G6 45	Machine Learning at SCQF Level 5
J2G6 46	Machine Learning at SCQF Level 6
H95Y 46	Statistics at SCQF Level 6

Each unit specification includes information about the purpose of the unit, its outcomes and evidence requirements, and also provides guidance about delivery and assessment.

18. What support materials are available?

This qualification is supported by assessments on [SOLAR](#). Teaching and learning materials are not available.

19. Where can I find Assessment Support Packs?

There are no Assessment Support Packs (ASPs). The assessments are available (only) on SOLAR.

20. Are assessments available on SOLAR?

Yes. There are SOLAR assessments for all of the mandatory units. At this time, there are no assessments for the optional units.

21. Can my centre offer the qualification?

Centres will require approval to offer this award. These qualifications are **not automatically approved**. The qualification is “devolvable”, which means that Scottish colleges can approve themselves to deliver it.

22. How does my centre get approved?

All centres will require approval to offer these awards. Colleges can approve themselves. Schools and other centres will have to [apply for approval](#). The starting point is to contact your SQA Business Development Manager.

23. What resources do I need to offer the qualification?

No special resources are needed to offer this suite of awards. The qualification, at all levels, can be delivered using standard spreadsheet software such as Microsoft Excel. However, ideally, you should have a range of analytical software and appropriate hardware for data analysis, such as widescreen displays and fast computers with good graphics. Some optional units (such as Machine Learning) will require specialist software. The [Group Award Specification](#) provides advice about resources.

24. Who should teach the qualification?

Any suitably qualified and experienced teacher can deliver the qualification. Data science is a multi-disciplinary field and it is envisaged that this qualification will be taught wholly, or partly, by teachers with various backgrounds including Computing Science, Mathematics and Social Sciences.

25. What help is available?

This is a new qualification in a new area of computer science. As such, SQA will support centres in their delivery of this award in a number of ways. During the first couple of years of delivery (2019-2021), centres will receive special support from SQA, including a dedicated support forum and specialist help and advice from expert practitioners.

26. Are there any special features of this qualification?

Yes. This is a unique qualification. Scotland is the first country to offer a national qualification in data science for schools. Many of the topics are new. Topics such as data analysis, Big Data, data ethics and Machine Learning are unique. There is a shortage of people trained in data science. Data analysis skills are also useful for university. The suite of awards is [hierarchical](#).

27. What is a hierarchy?

This suite of qualifications is hierarchical, which means that learners can mix-and-match units across levels and still gain a group award. For example, learners who pass Data Science and Data Citizenship at SCQF Level 6 (Higher) but only pass Machine Learning at SCQF Level 5 (National 5) will still gain the qualification at Level 5 (National 5). Please note that learners must be entered for the appropriate level by the presenting centre.

28. What units are in hierarchies?

The component units have been placed in hierarchies, which means that a pass in a unit at one level is considered a pass in the same unit at lower levels. For example, a learner who passes Data Science at SCQF Level 5 is also considered to have passed Data Science at Level 4. The following families of units have been placed in hierarchies.

Data Science 4	Data Science 5	Data Science 6
Data Citizenship 4	Data Citizenship 5	Data Citizenship 6
Data Science: Statistics 5	Data Science: Statistics 6	
Machine Learning 5	Machine Learning 6	
Data Science: Project 5	Data Science: Project 6	
Computer Programming 5	Computer Programming 6	
Data Security 5	Data Security 6	

Please note that learners must be entered for the appropriate unit(s).

29. How do I get started?

The starting point is to visit the [Subject Page](#) and download the [Group Award Specification](#) (GAS). Once you have read the GAS, download and read the [unit specifications](#). You then have to decide the [level](#) of the award and the optional unit. For example, you might decide to deliver the Level 5 award, using Machine Learning as the optional unit. Alternatively, because the award is [hierarchical](#), you might decide to deliver all of the levels. Once you have decided what you're doing, you have to get [approved](#) to offer the qualification, which involves ensuring that you have appropriate [resources](#) and [expertise](#). Finally, don't forget to join the [support group](#) so that you can get [help](#) if/when you need it.

30. How do I find out more?

Contact computing@sqa.org.uk.