Computer Science Road Maps

Learning in Science sequenced by year

Computer Science Progress: Y7

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Clear Messaging in Digital Media

Networks from semaphores to the internet

Y7

HT1

HT2

Programming in Scratch - Part 1

End Point Checklist 1
First Three Topic Areas
❏ Digital Media
❏ Networks
❏ Scratch

End Point 1

HT3

End Point Checklist 2
Last Three Topic Areas
❏ Data/Spreadsheets
❏ Scratch

Modelling data using spreadsheets

HT4

HT5

End Point 2

Skills:
Design & development
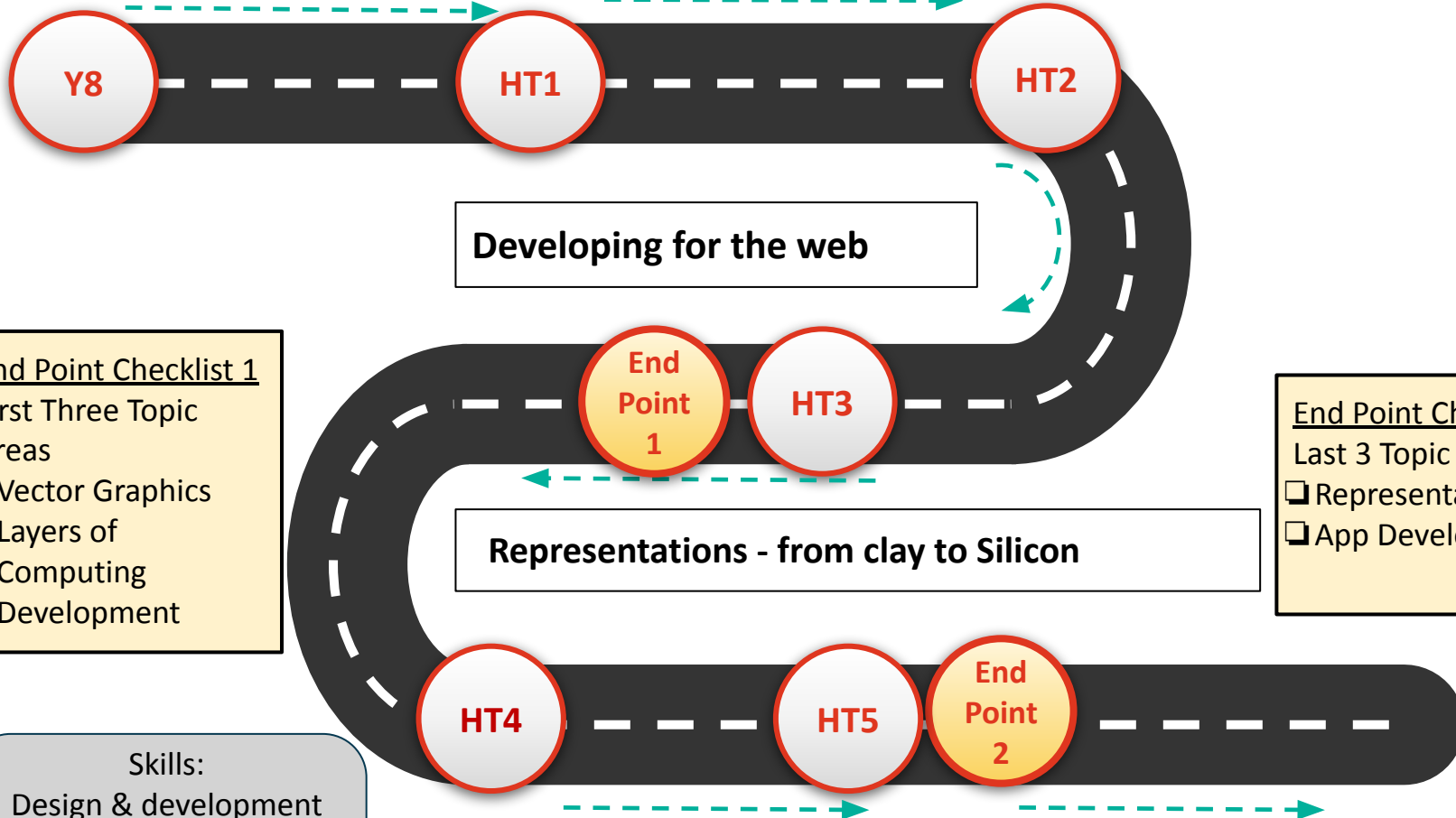Investigation skills
Analysis and evaluation
Programming

Programming in Scratch - Part 2

Using Media
Gaining support for a cause

Computer Science Progress: Y8

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Media - Vector Graphics

Layers of Computing Systems

Y8 ----- **HT1** ----- **HT2**

Developing for the web

End Point Checklist 1
First Three Topic Areas
❏ Vector Graphics
❏ Layers of Computing
❏ Development

End Point 1 **HT3**

Representations - from clay to Silicon

End Point Checklist 2
Last 3 Topic Areas
❏ Representation
❏ App Development

HT4 ----- **HT5** ----- **End Point 2**

Skills:
Design & development
Investigation skills
Analysis and evaluation
Programming

Mobile App Development

Introduction to Python Programming

Computer Science Progress: Y9

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Python Programming with Sequences of Data

Media - Animations

This year, during options, you can choose to do study Computer Science at KS4.

Y9

HT1

HT2

Data Science

End Point Checklist 1
First Three Topic Areas
❏ Python
❏ Media - Animations
❏ Data Science

End Point Checklist 2
Last Three Topic Areas
❏ Audiovisual
❏ Cybersecurity
❏ Programming

End Point 1

HT3

Representations - Audiovisual
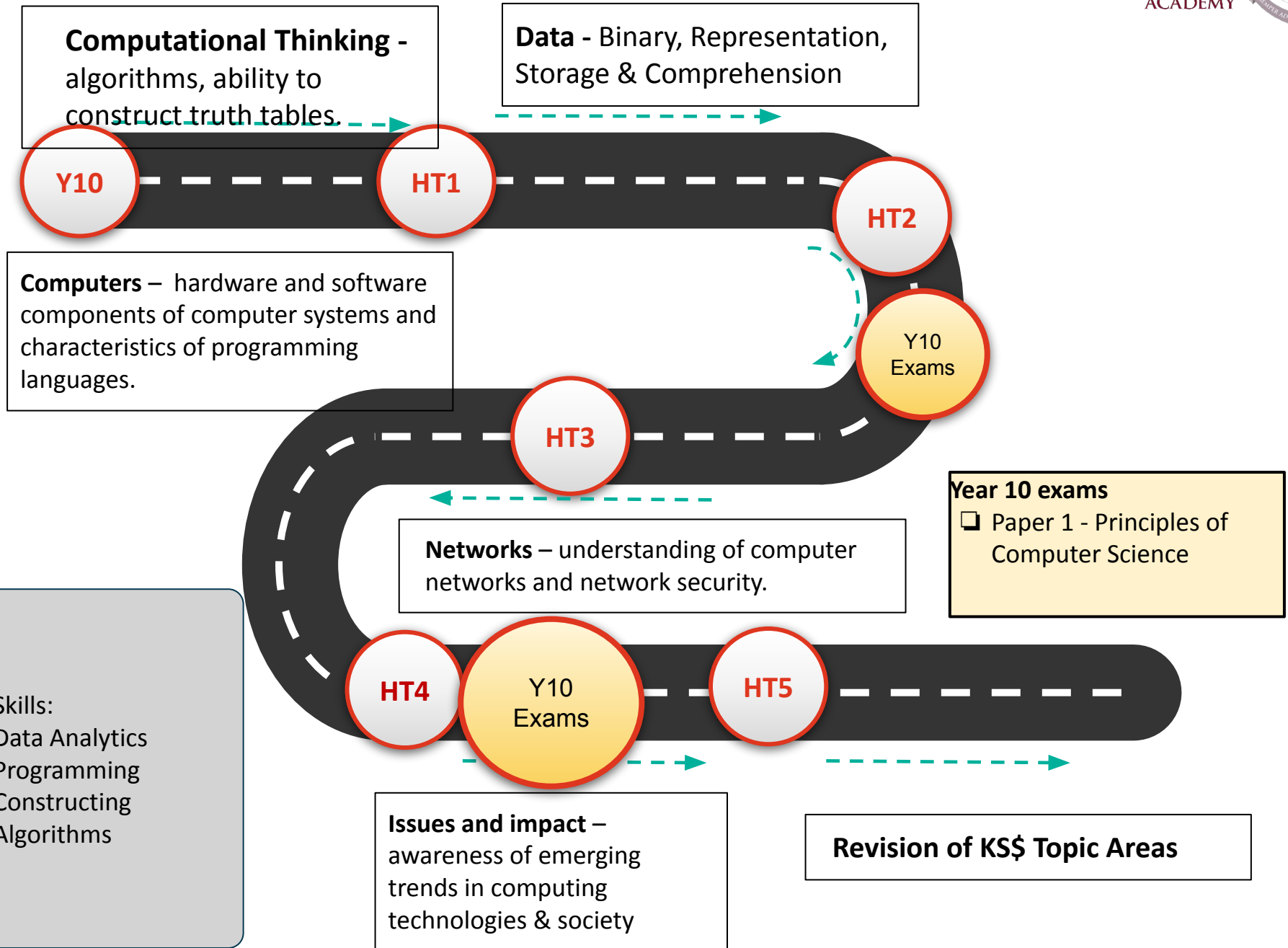
HT4

End Point 2

HT5

Skills:
Programming
Image & sound editing
Data Analytics

Introduction of Cybersecurity

Programming skills with Physical Computing

Computer Science Progress: Y10

Computational Thinking - algorithms, ability to construct truth tables.

Data - Binary, Representation, Storage & Comprehension

Y10

HT1

HT2

Computers – hardware and software components of computer systems and characteristics of programming languages.

Y10 Exams

HT3

Year 10 exams
❏ Paper 1 - Principles of Computer Science

Networks – understanding of computer networks and network security.

Skills:
Data Analytics
Programming
Constructing
Algorithms

HT4

Y10 Exams

HT5

Issues and impact – awareness of emerging trends in computing technologies & society

Revision of KS$ Topic Areas

Computer Science Progress: Y11

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Develop Code

Constructs

Y11

HT1

Mocks
1

HT2

Data Types and Structures

**Input/Output
/Operators**

HT3

Subprograms

HT4

Mocks
2

GCSE
Exams

★ Paper 1 - Principles
of Computer
Science
★ Paper 2 -
Application of
Computational
Thinking

**Targeted
revision from
mocks**

U	1	2	3	4	5	6	7	8	9
U	G	F	E	D	C	B	A	A*