

Year 8

Cross-Curriculum Links Between Computing and Geography

Summary

In Year 8, the connection between the Computing and Geography curriculums focuses on the applications of technology in geographical analysis, such as using GPS and data mapping, and developing understandings of human impacts on environments that can be simulated or analyzed through programming and data handling.

Detailed Links

Autumn Term 1: Plate Tectonics and Programming Basics

Computing:

- Introduction to algorithms and basic programming concepts.
- Using simulations to model scenarios.

Geography:

- Study of plate tectonics and the associated geographical impacts.
- Understanding natural disasters like earthquakes and volcanic eruptions.

Cross-Curriculum Ideas:

- Developing a simulation in a visual programming environment to show tectonic movements and potential effects on the Earth's surface.
- Using algorithmic thinking to predict the outcomes of plate shifts based on given data.

Autumn Term 2: Climate Zones and Data Representation

Computing:

- Data handling and representation in different forms.
- Manipulation and analysis of large data sets.

Geography:

- Examination of different climate zones around the world.
- Study of the factors influencing these climates.

Cross-Curriculum Ideas:

- Creating interactive maps and graphs to depict climate data across different zones.
- Programming a tool that can analyze and predict climate change based on historical data.

Spring Term 1: Population Dynamics and Databases

Computing:

- Introduction to databases; creating, querying, and managing data.

Geography:

- Studying population growth, distribution, and the factors affecting these patterns.

Cross-Curriculum Ideas:

- Students can use database software to manage and analyze population data from different countries and predict future trends.
- Using SQL to query databases for specific geographical patterns and demographic information.

Spring Term 2 and Summer Term 1: Economic Development

Computing:

- Advanced data analysis and visualization.
- Exploring economic modeling through computational methods.

Geography:

- Exploration of global economic development, trade patterns, and their impacts on geographic regions.

Cross-Curriculum the societies that rely on them.

- Create simulations to understand the impact of economic policies on geographical regions.
- Utilizing complex data sets to visualize trade imbalances and developmental indexes in different formats.

Summer Term 2: Sustainable Development

Computing:

- Use of technology in promoting sustainability.
- Project-based learning involving real-world data and its analysis.

Geography:

- Exploration of sustainable practices worldwide and their environmental outcomes.

Cross-Curriculum Ideas:

- Developing a digital campaigning tool to promote awareness on sustainability.
- Analysis of environmental data to create interactive and educational presentations.

Further Development of Cross-Curriculum Links

To extend these interdisciplinary connections, incorporating project-based learning units where students develop applications or simulations to solve real-world geographical issues can be effective. These projects can integrate programming skills to create interactive maps, simulations, or data visualizations, offering a practical application of both computing and geography skills. Moreover, encouraging collaborative projects can enhance problem-solving and critical thinking capabilities, while helping students make more concrete connections between the theoretical aspects of both subjects.