Liverpool John Moores University

Title:	IDEAS AND EVIDENCE IN SCIENCE
Status:	Definitive
Code:	**5001PSSC** (104412)
Version Start Date:	01-08-2016
Owning School/Faculty:	Education
Teaching School/Faculty:	Education

Team	Leader
Kenneth Clays	Y

Academic Level:	FHEQ5	**Credit Value:**	12	**Total Delivered Hours:**	31
Total Learning Hours:	120	**Private Study:**	89		

Delivery Options
Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	8
Practical	10
Seminar	12
Tutorial	1

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS1	A seminar presentation on the development of a scientific theory (1500 words)	50	
Report	AS2	Critical analysis and evaluation of teaching materials (1500 words)	50	

Aims

To develop an understanding of the unique nature of ideas and evidence in science and of scientific enquiry and an appreciation of issues relating to the delivery of this

component of science education in primary and secondary schools.

Learning Outcomes

After completing the module the student should be able to:

1	Discuss and evaluate the nature of ideas and evidence and their role in the development of scientific ideas and theories in historical and contemporary contexts;
2	Assess the nature of social, cultural and political influences on the development of a scientific theory;
3	Develop and evaluate a range of teaching strategies and resources to support the effective delivery of the scientific enquiry component of the Science National Curriculum;

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

Presentation	1	2
Report	3	

Outline Syllabus

The nature of scientific knowledge.
How is scientific knowledge developed.
The roles of creativity, ideas and evidence in developing scientific theories.
The nature of scientific enquiry and the historical developments of a scientific methodology.
Case studies on the development of scientific ideas and theories focusing on the influence of ideas and evidence and on social, cultural and political.
The history of Scientific Enquiry in the Science National Curriculum.
Current research into the teaching and learning of enquiry skills.
Progression in Scientific Enquiry across Key Stages 2 to 4.
Developing and evaluating teaching materials.

Learning Activities

Lectures
Seminars
Case studies
Analysis of Key Stage 3 and 4 curriculum and teaching materials
Laboratory based workshops
Discussing research findings
Independent research

Notes

This module is an examination of science method and science education pedagogy. It is designed to develop the participants' understanding and confidence in science and it will maximise their potential to personally drive their ability to study science and have the right sort of understanding to teach science.