

The role of science in schools

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22/6/17

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Slide 1

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Courtney McLaughlin, 07/04/2017

Q1: What is the role of schools?
(10 marks)

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Q2: What is the role of science?
(10 marks)

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Q3: What is science anyway?
(50 marks)

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What is science anyway?

Computer Science

Design and Technology

Economics

Electronics

General Studies

Geography

Geology

Health and Social Care (applied)

ICT

Physical Education

Psychology

Sociology

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<http://www.ocr.org.uk/qualifications/by-subject/science/>

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“The dual mandate”

“...in 1869... the recently formed National Education League began its campaign for free, compulsory and non-religious education for all children.

The views expressed by industrialists that mass education was vital to the nation's ability to maintain its lead in manufacture carried considerable weight in Parliament. A Bill which met many, but not all, of the League's wishes was drafted and introduced by W. E. Forster, and quickly passed.”

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<http://www.parliament.uk/about/living-heritage/transformingsociety/livinglearning/school/overview/1870educationact/>

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The Uses of Science Literacy



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Science Lives Here

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Who's on the bandwagon?

STM (scientific, technical, and mathematics)

STM (science, technology, and medicine; or scientific, technical, and medical)

eSTEM (environmental STEM)

iSTEM (Invigorating Science, Technology, Engineering and Mathematics); identifies new ways to teach STEM-related fields.

METALS (STEAM + Logic)

STREM (Science, Technology, Robotics, Engineering and Mathematics); adds robotics as a field

STREM (Science, Technology, Robotics, Engineering and Multimedia); adds Media as a field

STREAM (science, technology, Robotics, engineering, and mathematics); adds robotics field

STEAM (science, technology, engineering, arts and mathematics)

STEAM (science, technology, engineering and applied mathematics); more focus on applied mathematics

GEMS (Girls in Engineering, Math, and Science); used for programs to encourage females into these science fields

BEMS (Boys in Engineering, Math, and Science); used for programs to encourage males into these science fields

STEMM (science, technology, engineering, mathematics, and medicine)

AMSEE (Applied math, science, engineering, and entrepreneurship)

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https://en.wikipedia.org/wiki/Science,_technology,_engineering,_and_mathematics

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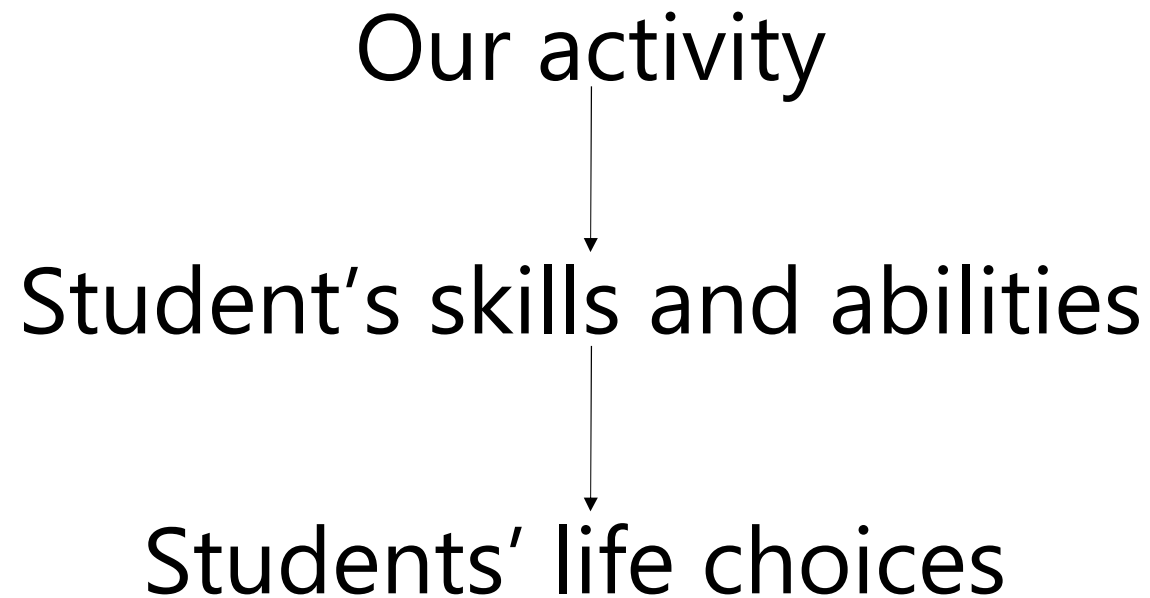
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The epiphanic paradigm

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Beyond the epiphany

Diversity, equity, and “Science Capital”



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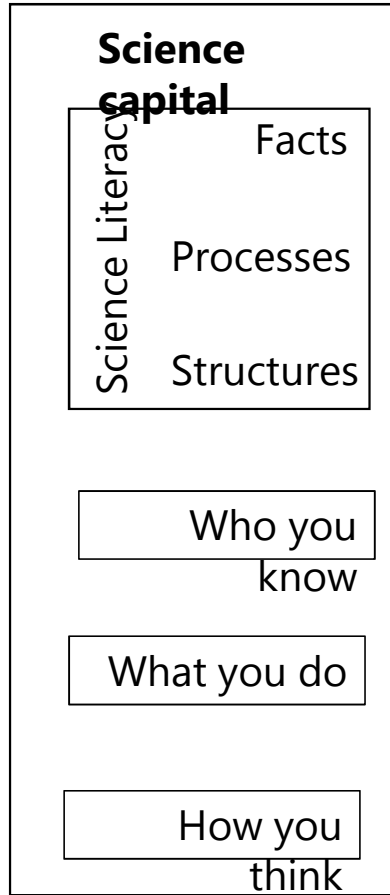
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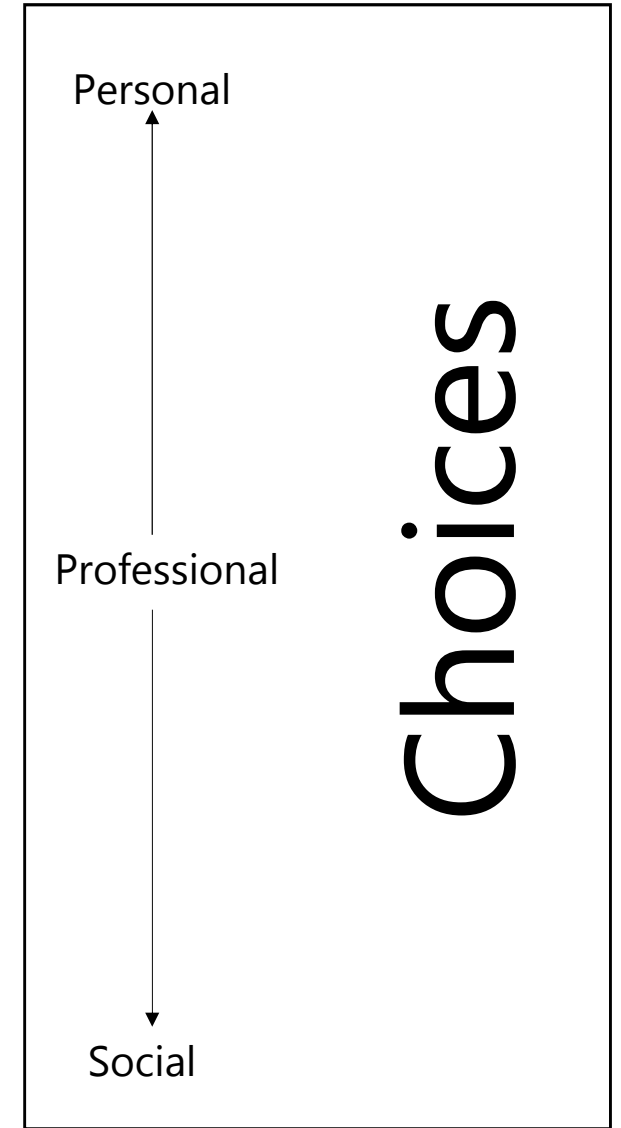
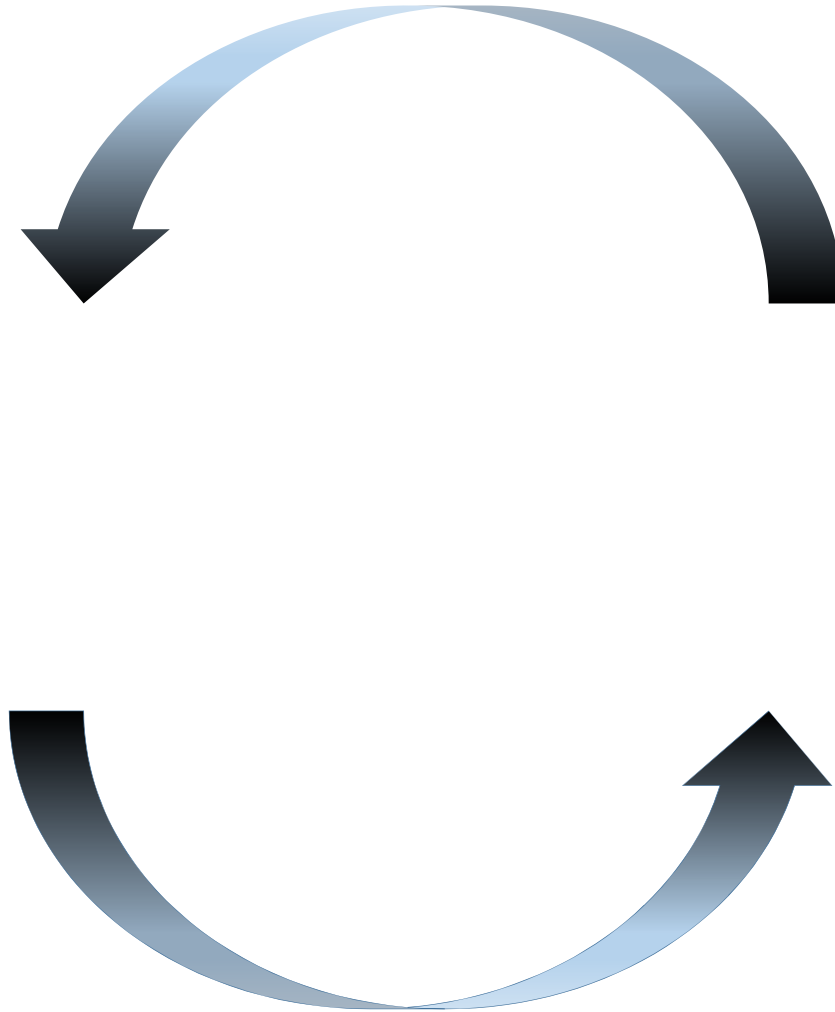
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Skills & abilities



cf Bourdieu "capital"/ Sen "capability"



cf Bourdieu "habitus"/Sen "functioning"

How the Ri's programme fits together

