Current developments and challenges in Education for Sustainable Development (ESD)

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1. ESD is NOT primarily about countering children's apathy

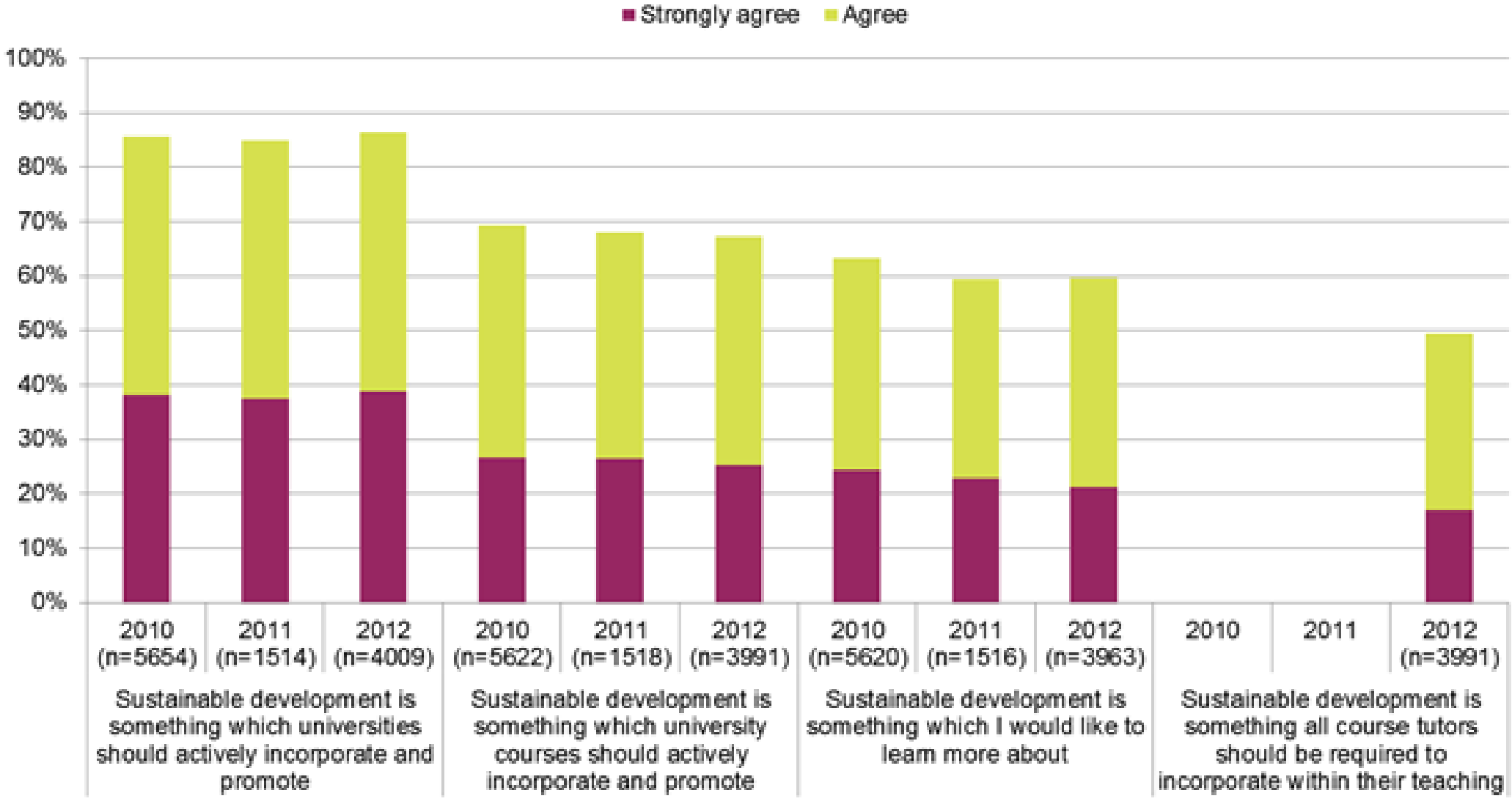
Young people express manifold interest in sustainability issues

Concerns at a Local Level	Concerns at a Global Level
Crime and violence	War and Terrorism
Community relations	Environmental problems
Lack of amenities	Hunger and poverty
Environmental problems	Social problems
Health risks	Crime and violence
Transport Problems	Diseases
Youth unemployment	Global Recession
Education	North/South Relations
Other	Other

Summary of young people's main issues of concern N=415

See also Hicks and Holden 2007

Listening to student voice

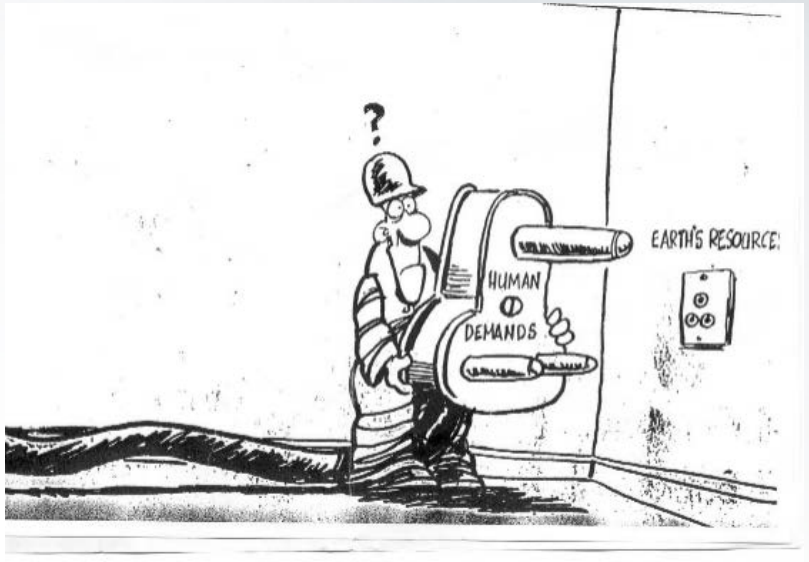


Drayson, Bone, Agombar, Kemp (2013) *Student attitudes towards and skills for sustainable development ,* HEA/NUS survey

2. ESD is about more than knowledge

In a changing world, Europe's young people need:

*"the kind of education that enables them to **engage** articulately as committed, active, thinking, global citizens as well as economic actors in the ethical, sustainable development of our societies."*
European Commission (June 2013)



The UN Decade of Education for Sustainable Development

"The overall goal of the UN Decade of ESD has been to integrate the principles, values and practices of sustainable development into all aspects of education and learning. This educational effort will encourage changes in behaviour that will create a more sustainable future in terms of environmental integrity, economic viability and a just society for present and future generations."

UN DECADE OF EDUCATION FOR SUSTAINABLE DEVELOPMENT
DÉCENNIE DES N.U. POUR L'ÉDUCATION EN VUE DU DÉVELOPPEMENT DURABLE
2005-2014

Sustainability competence: the ability….

- to appreciate the importance of environmental, social, and political **contex**ts	- to solve real-life problems in a **non-reductionist** manner	**- to think creatively** and holistically and make critical judgements
- to develop a high-level of **self reflection**, personal and professional	- to identify, understand, evaluate and **adopt values** conducive to sustainability	- to bridge the gap between **theory and practice**
- to participate creatively in **inter-discipinary teams**	- to initiate and **manage change**	AND, have a broad and balanced foundation knowledge of SD

HEA UK 2005

Sustainability competence:

- Systems thinking
- Adopting an integral view
- Personal leadership and entrepreneurship
- Unlocking creativity
- Appreciating chaos & complexity
- Fostering collective change

(The Netherlands)

WITH PLYMOUTH UNIVERSITY

Sustainability competence

- Competence to work in an interdisciplinary manner
- Competence to achieve open-minded perception, transcultural understanding and cooperation.
- Participatory competence.
- Planning and implementation competence.
- Ability to feel empathy, sympathy and solidarity.
- Competence to motivate oneself and others.
- Competence to reflect in a distanced manner on individual and cultural concepts.
- Competence to think in a forward-looking manner, to deal with uncertainty, and with predictions, expectations and plans for the future.

(Germany)

3. ESD is as much about pedagogy as it is content

Transmissive Learning: learning that includes the provision of information through teacher exposition and supporting materials;
Disciplinary Learning: learning that starts from key foci in particular subject-disciplines (such as Science or Geography);
Interdisciplinary learning: learning that includes perspectives from different subject disciplines to support arriving at a conclusion;
Critical thinking-based learning: learning that seeks to explore the values of stakeholders, challenging them when appropriate;
Systems thinking-based learning: learning that includes an explicit focus on interconnections to understand and explore systems holistically;
Problem-based learning: learning that requires students to solve problems about global issues;
Participatory/collaborative Learning: learning that requires working actively with others on joint tasks and issues;
Multi-stakeholder social learning: learning that brings together people with a range of interests and concerns to investigate and solve problems; and
Discovery Learning: learning that includes elements of mystery to engender curiosity and exploration.

UNESCO 2012:25-26

Pedagogical shifts in ESD

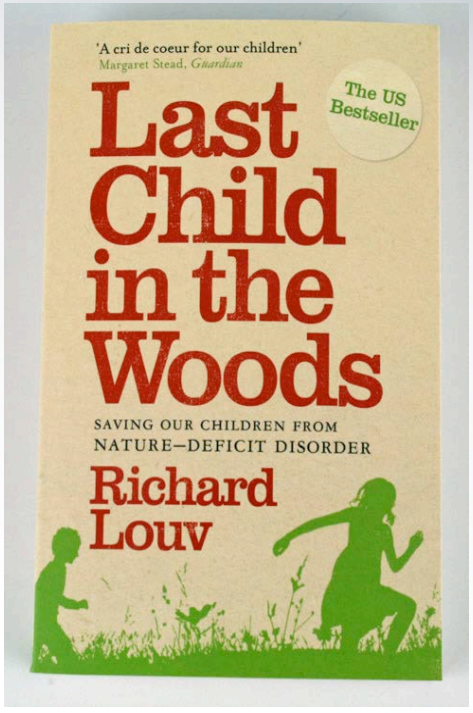
A noteworthy pedagogical shift seems to be occurring in ESD as the DESD unfolds. It is marked by a rise in alternative/innovative forms of teaching and learning. The M&E literature review (Tilbury, 2011) identified four key processes under - pinning ESD: processes which stimulate innovation within curricula as well as through teaching and learning experiences; processes of active and participatory learning; processes which engage the 'whole system,' and processes of collaboration and dialogue (including multi-stakeholder, and intercultural dialogue). (UNESCO, 2012: 25–26)

Emerging ESD Pedagogy

Pedagogical approaches that are particularly effective in the context of education for sustainable development tend to have an authentic aspect, enabling students to relate their learning to real-life problems and situations. There is likely to be a strong interdisciplinary, multidisciplinary or transdisciplinary element, reflecting the interconnected nature of many issues in sustainable development. Experiential and interactive approaches are also particularly well suited to education for sustainable development, particularly where they encourage students to develop and reflect on their own and others' values. **Critical reflection on values and assumptions may in some cases lead to what is known as 'transformative learning'.** In addition, participatory learning approaches, peer-learning and collaboration - within and beyond the classroom - are encouraged, allowing students to be exposed to multiple perspectives and enabling creative responses to emerge. (QAA 2014:13)

4. ESD requires new learning spaces

There is now a growing interest in many countries concerning the design of learning spaces to ensure environments which are geared towards the diverse needs of students in their learning (eg. JISC 2006, Jamieson et al 2000, Oblinger 2006, Johnson and Lomas 2005)



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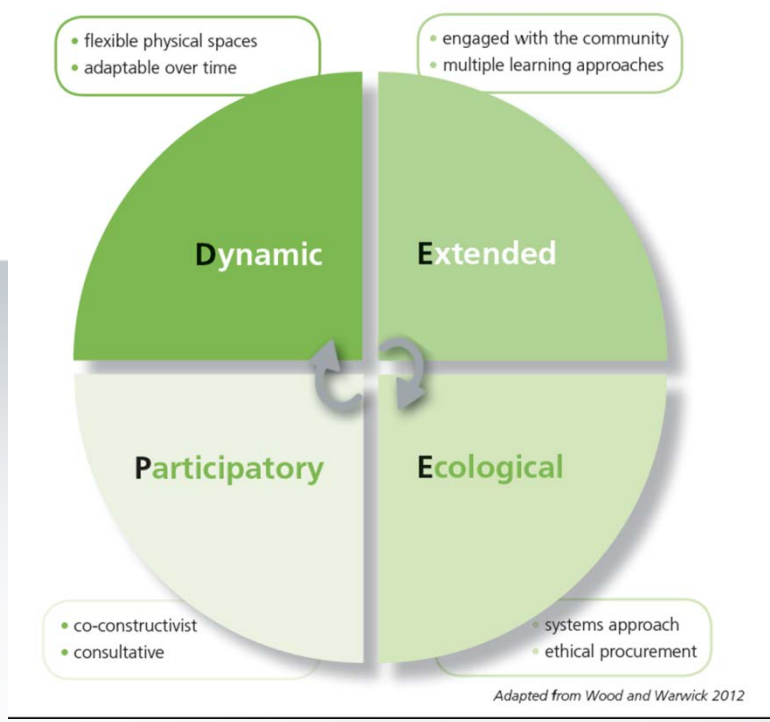
New learning spaces beyond the classroom

1 large group spaces
2 small group spaces
3 personal solitude spaces
4 relaxation spaces
5 exercise spaces



The DEEP learning space design model

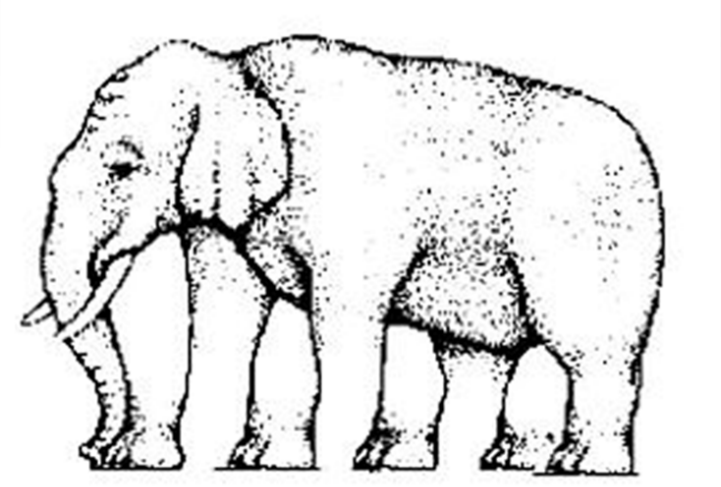
New learning spaces beyond the classroom

6 specialist spaces
7 transition spaces
8 eating spaces
9 exhibition spaces
10 natural spaces

5. ESD needs to give attention to the social dimensions of learning spaces

Principles for open dialogic inquiry

1. Including everyone: The knowledge each person brings deserves to be actively listened to in order to be understood.
2. Lifelong learning: People can see the world from different points of view that can change and develop over time.
3. Recognising diversity: Our points of view are in part related to who we are and where we come from.
4. Critical and creative engagement: All knowledge, including our own, can be questioned and re-considered through dialogue.



6. ESD involves children encountering different perspectives

THE DEVELOPMENT COMPASS ROSE

Natural

These are questions about the environment - energy, air, water, soil, living things and their relationships to each other. These questions are about the built as well as the 'natural' environment.

Who decides?

These are questions about power, who makes choices and decides what is to happen; who benefits and loses as a result of these decisions and at what cost.

Economic

These are questions about money, trading, aid, ownership, buying and selling.

Social

These are questions about people, their relationships, their traditions, culture and the way they live. They include questions about how, for example, gender, race, disability, class and age affect social relationships.

This framework was developed by teachers involved in the Tide~ network as a tool for investigating development and citizenship issues.

from *The development compass rose consultation pack*

TIDE~ global learning toolkit
www.tidegloballearning.net

Climate change demonstrators seeking to draw attention to the points of view of indigenous people. New York 21st Sept 2014

A great practical solution to provide safe water to the world’s poorest people?

2 hours constant play every day provides the bare minimum water requirement for about 200 people

Complexity of the pump mechanism means that it makes local operation and maintenance difficult leading to dependence on international suppliers.

BUT..

Criticism of the high cost of play pumps ($14,000 approx). For the same price you can buy 4 hand pumps.

Does this represent a form of child labour?

7. ESD is concerned with system change

1 Climate change :

How can we mitigate climate change?

How can we improve the resilience and adaptability of our communities in the face of climate change

How can we meet growing energy demands in ways that are carbon neutral?

2 Environmental degradation :

How can we provide food for all without weakening terrestrial ecosystems and reducing soil quality?

How can we value the health of the environment within our economic decision-making processes

How can we tackle root problems of poverty that contribute to unsustainable and environmentally exploitative behaviours?

3 Biodiversity loss :

How can we have a more complete picture of where human lifestyles and population growth are impacting detrimentally on the bio-diversity of the planet?

How can we advance behaviour change that conserves habitats and reduces the threats of extinction to species?

How can we pursue a quality of life for all, in ways that are more harmonious with nature?

Sustainable Challenges (cont'd)

4 Pollution and waste :

How can we clean up our industrial process of production?

How can regenerative systems of a circular economy dominate over linear flows of 'resource to waste'?

5 Fresh water scarcity :

How can everyone have access to clean water, free from conflict and without overharvesting natural water supplies for future generations?

How can the burden of water collection be eased, for women in particular, and technology harnessed to improve access to local water supplies?

6 Extreme poverty :

How can the progress made with regard to reducing poverty levels worldwide (through the pursuit of the Millennium Development Goals) be not only maintained but increased?

Sustainable Challenges (Cont'd)

7 Inequality :

How can the currently widening gap between the economically rich and poor be reduced both within and between countries?

How can ethical economic systems provide fairer working conditions for the most vulnerable employees?

How can we protect the liberty and human rights of all, regardless of gender, religion, sexuality or socio-economic background?

8 Food and nutrition insecurity :

As the human population continues to rise how can we grow and supply enough food for all?

How can food supplies be made resilient in the long term against the impact of megatrends such as climate change?

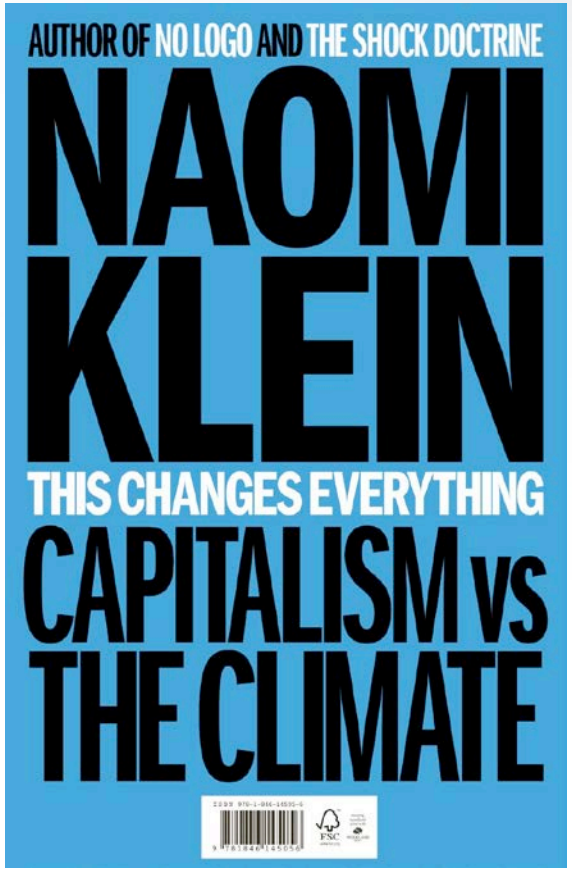
9 Disease and health risks :

How can access to existing treatments for disease and illness be made available to all?

How can the threat of new, more resistant strains of diseases be responded to in the future?

How can citizens be supported in healthy lifestyle choices in order to reduce the rising risk of non-communicable diseases or problems such as obesity?

Systems thinking



followthethings.com
another kind of shopping

CITIZEN SCIENCE ALLIANCE

8 ESD as a pedagogy of hope

A sense of hopelessness?

"I sometimes wonder how the world will be after 20 years. I personally think it will keep getting worse…… there probably will be numerous wars and there will be no life that exists on earth…….the vast majority of communities don't really improve over time. I think the world will be so horrible that people wouldn't actually want to live in it and would rather die."

14 year old pupil, Birmingham, UK

The science of potential solutions

Michael Pritchard's water filter makes filthy water drinkable

See change:
The Future Leaders Programme

Integrates 3 participatory educational approaches:

1. Critical dialogue

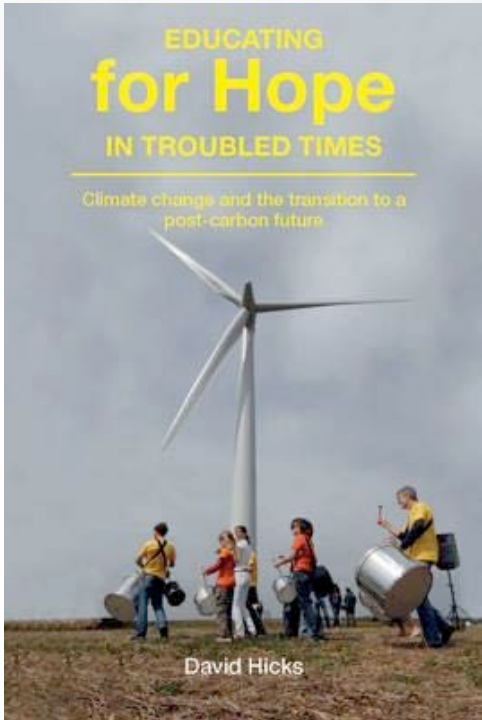
   (students identifying their own sustainability issues of concern)

2. Creative enquiry

   (deliberation around a chosen sustainability issue and exploration of possible action responses)

3. Collaborative social action

   (Students creating and leading their own action project to seek to make a difference within their chosen issue)

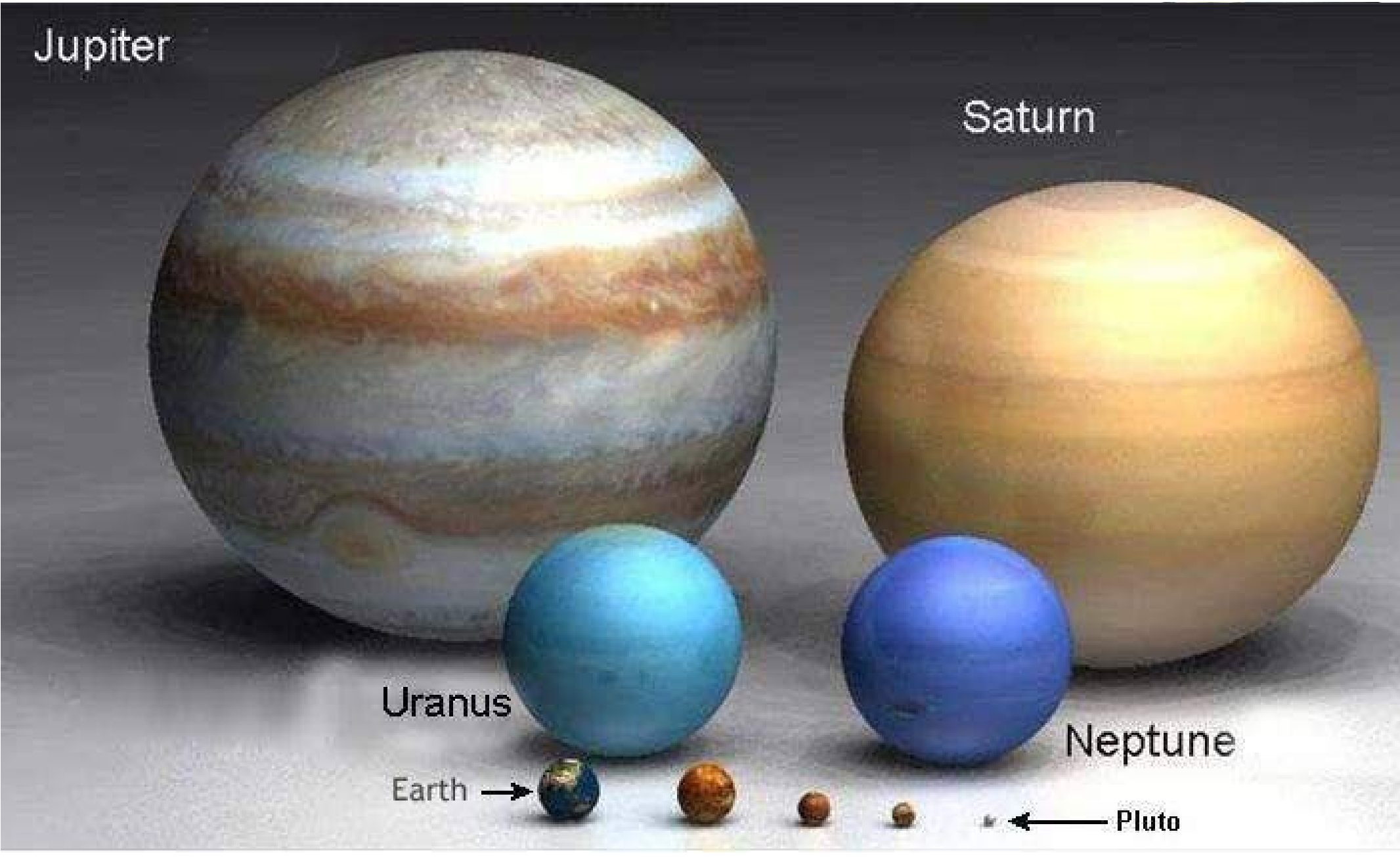


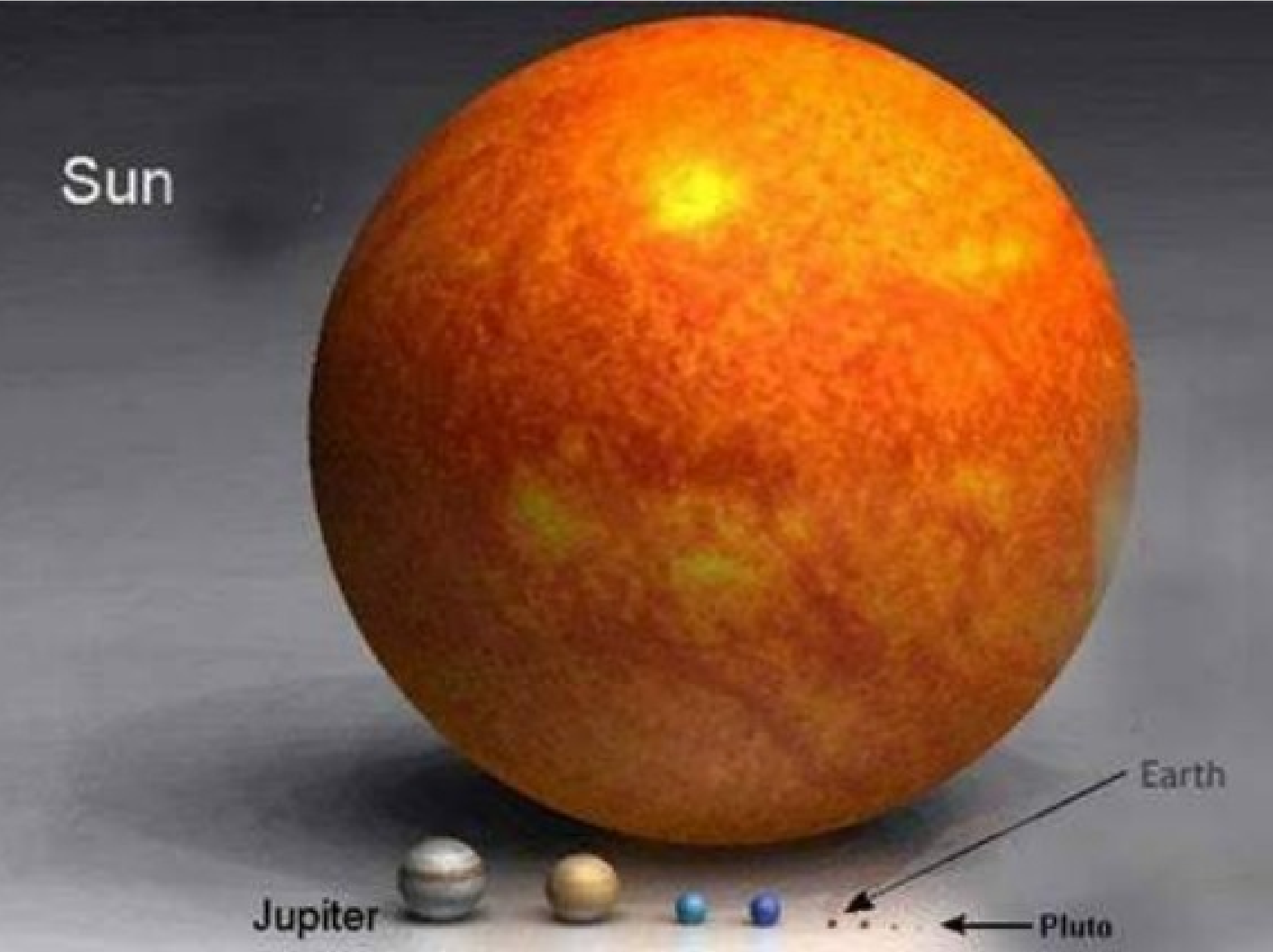
9 ESD is about nurturing a sense of wonder about where we live

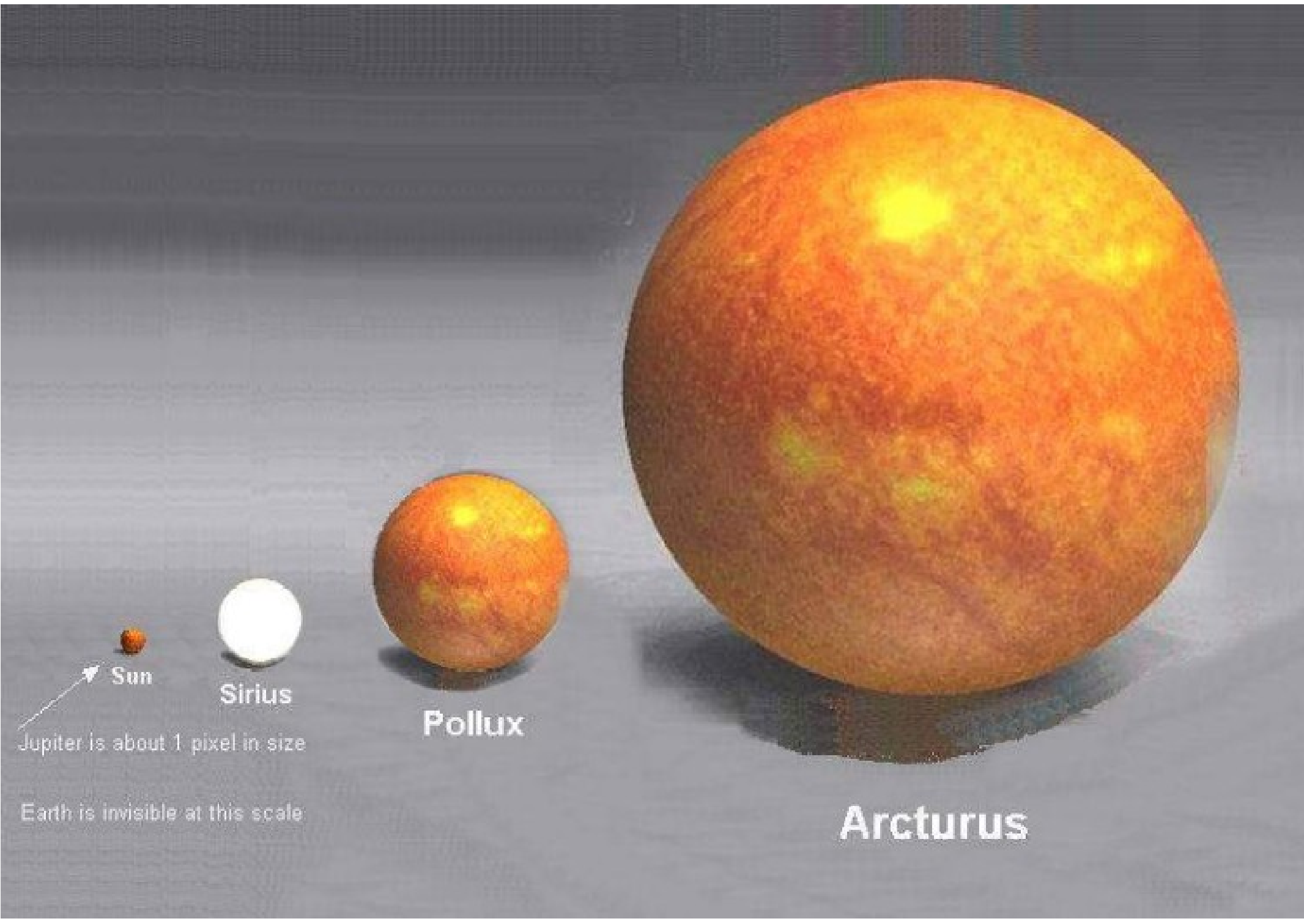
Not just about outrage

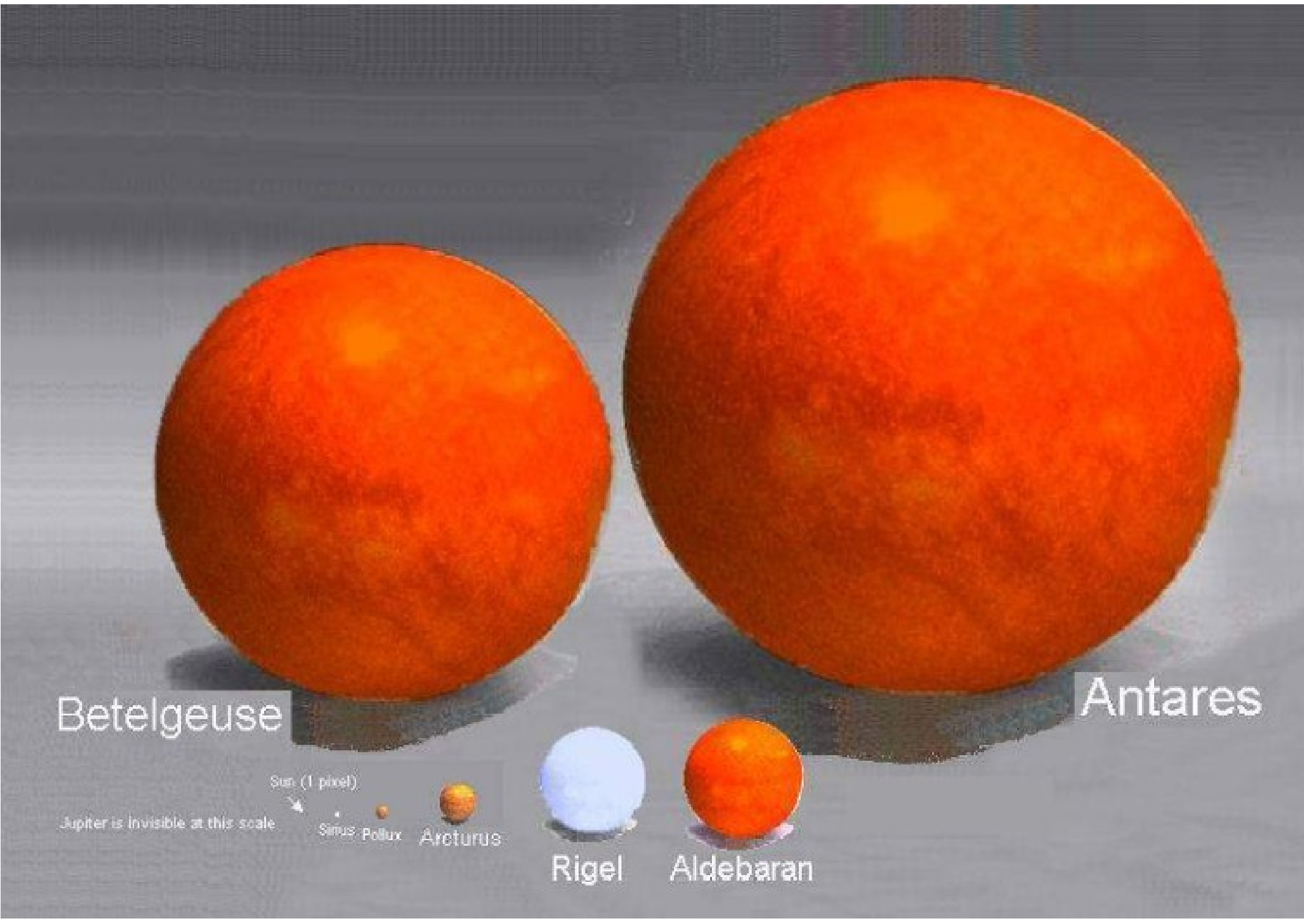
1.4 million children die every year from diarrhoea caused by unclean water and poor sanitation – **that's one child every 20 seconds**.

Not just about cognitive dissonance

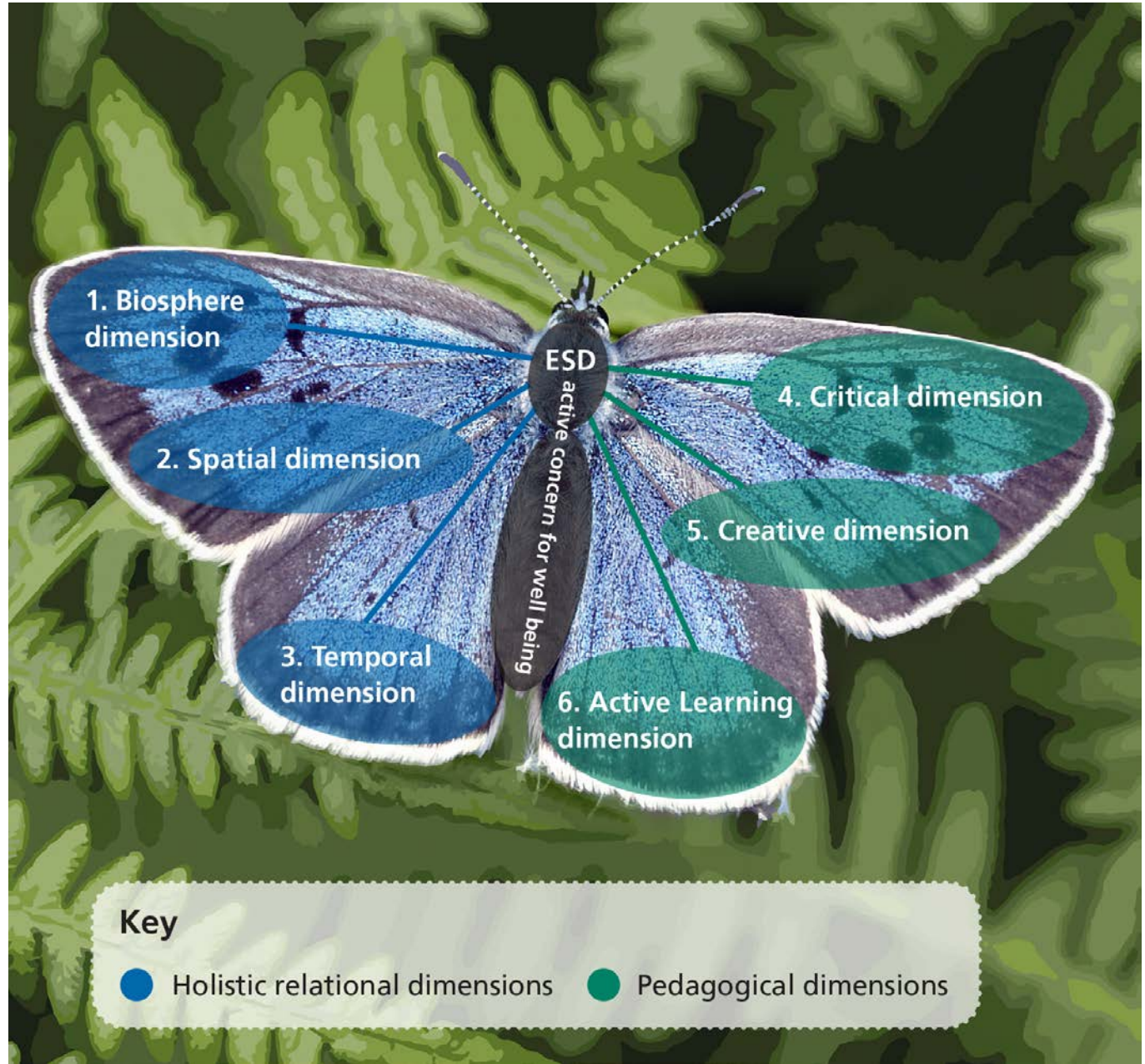

Jupiter
Saturn
Uranus
Neptune
Earth
Pluto


Sun
Earth
Jupiter
Pluto


Sun
Sirius
Pollux
Arcturus
Jupiter is about 1 pixel in size
Earth is invisible at this scale


Betelgeuse
Antares
Sun (1 pixel)
Jupiter is invisible at this scale
Sirius
Pollux
Arcturus
Rigel
Aldebaran

10 ESD: towards a pedagogy of love



Sustainable Citizens Inquiry questions

- *Holistic:* 'how does this relate to that?', 'what is the larger context here (environmental, economic, social and political)?';
- *Critical:* 'why are things this way, in whose interests?';
- *Appreciative:* 'what's good, and what already works well here?;
- *Inclusive:* 'who/what is being heard, listened to and engaged –or should be?';
- *Systemic:* 'what are or might be the consequences of this?';
- *Creative:* 'what innovation might be required'?; and
- *Compassionate:* 'what is wise action here, for us, for me?', 'how can we work towards the inclusive wellbeing of all?.

Centre for Sustainable Futures
Plymouth University

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2. ESD is about more than knowledge
3. ESD is as much about pedagogy as it is content
4. ESD requires new learning spaces
5. ESD needs to give attention to the social dimensions of learning spaces
6. ESD involves children encountering different perspectives
7. ESD is concerned with systemic engagement
8. ESD as a pedagogy of hope
9. ESD is about nurturing a sense of wonder about where we live
10. ESD: towards a pedagogy of love

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References

Drayson, R., Bone, E., Agombar, J. & Kemp, S. (2007) Student attitudes towards and skills for sustainable development. York: HEA.

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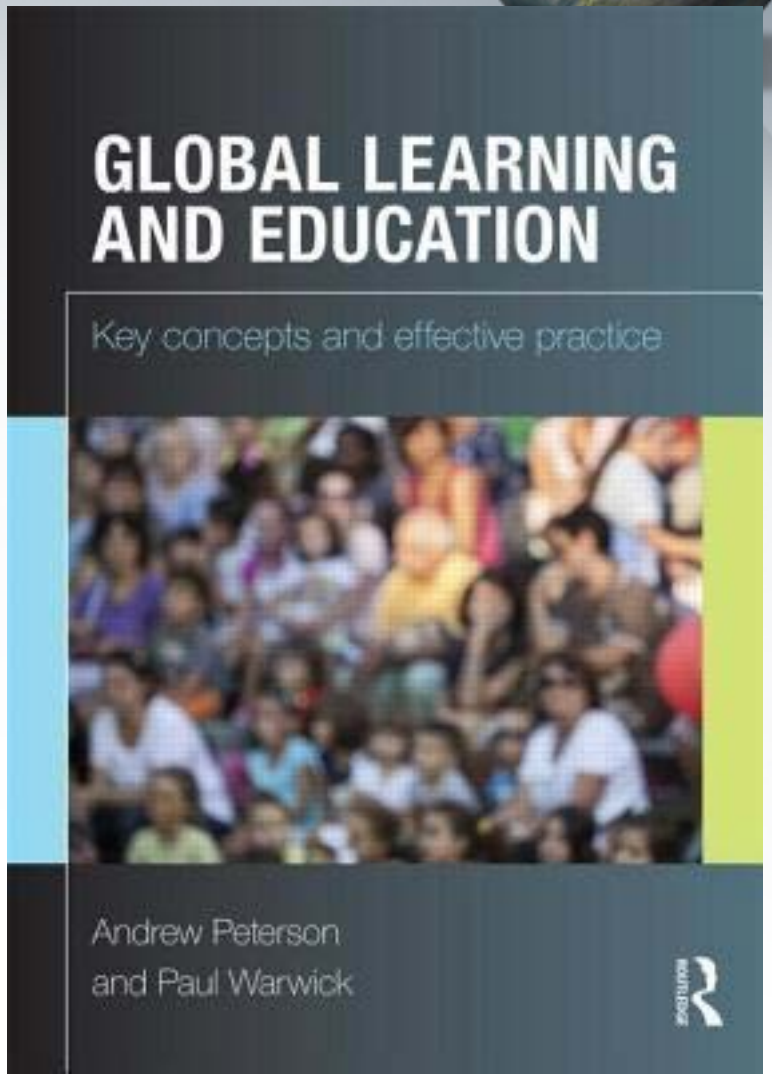

The ideas in this presentation are explored further in my book that will be published Nov 2014.