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BICYCLE MODEL ON CLIMATE CHANGE EDUCATION

Climate change is the biggest environmental challenge of our time, which is why it is also a central theme in education. The key viewpoints of climate change education are illustrated in the model on holistic climate change education. It is modelled after a bicycle because climate change education, like a bicycle, is an entity that needs all of its parts to function. A bicycle is not static - it is in constant movement and needs a user to work.

Climate change education is multidisciplinary in nature. Its conflicts give us a good opportunity to learn. Climate change education also encourages an open-minded teaching and learning process that may give rise to questions and challenges that one cannot prepare for beforehand. This means moving towards varied learning situations and letting go of pre-planned learning paths and controlled studying.

HANDLEBAR: FUTURE ORIENTATION

Education must provide ways to view the future with a critical eye but in a positive light. The aim of education for the future is to practise decision-making even in situations where one cannot be totally confident that the decision is right.

SADDLE: MOTIVATION AND PARTICIPATION

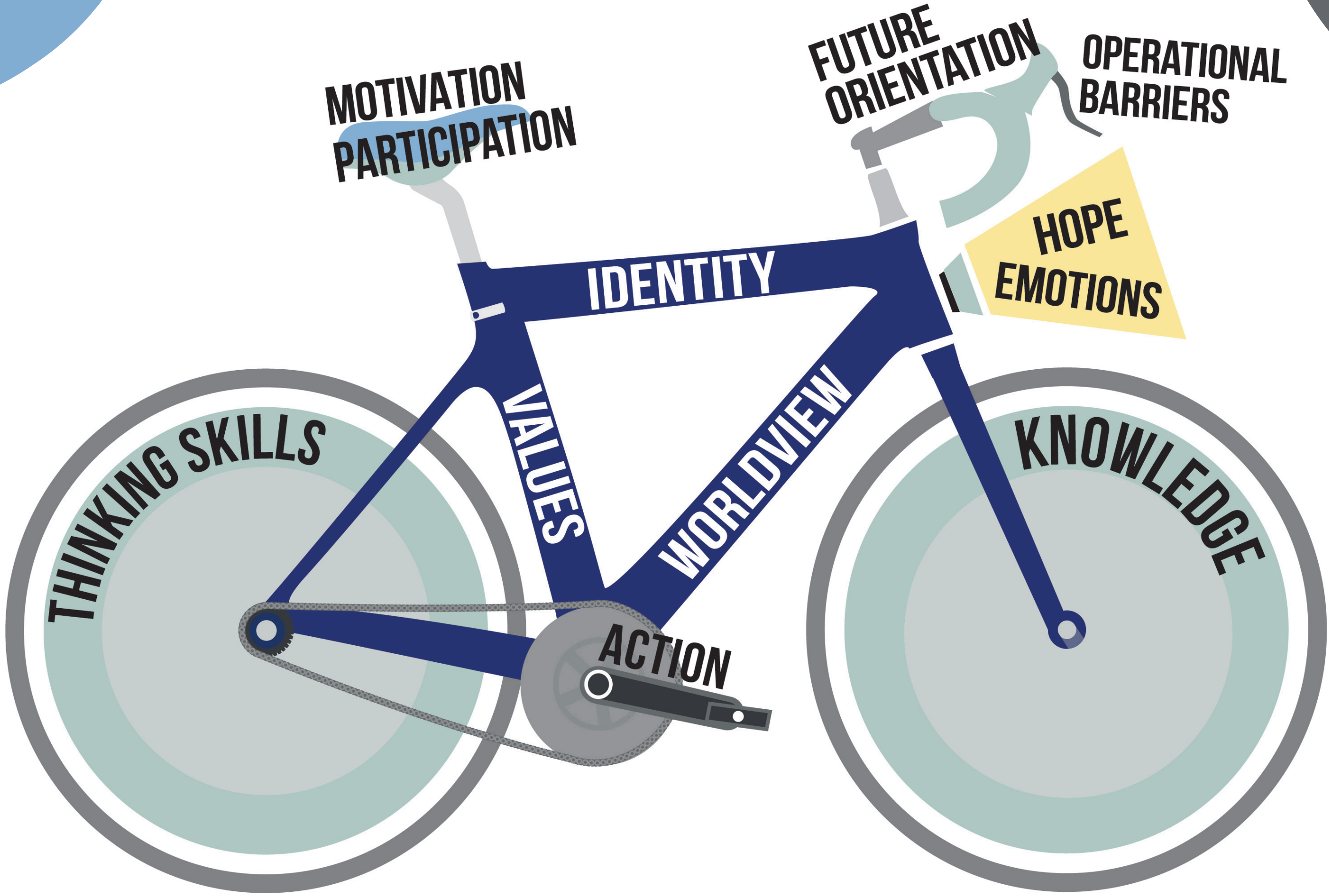
The saddle represents a person hopping on a bike. For climate change education to be motivating, it cannot present climate change as a distant problem or make it difficult to understand. There are many ways to slow down climate change. Participation is shown in the actions of individuals and communities.

BRAKES: OPERATIONAL BARRIERS

To promote environmentally responsible behaviour, it is crucial to understand what is hampering action and stopping people from acting. These obstacles are often humane - such as desire for comfort - but there are also plenty of structural obstacles. When the obstacles are recognised, they will also be easier to overcome.

FRAME: VALUES, IDENTITY AND WORLDVIEW

The learner's identity, values and worldview form the basis for learning about climate change. The frame that they form serves as the base for new skills and knowledge. The wickedness of climate change is apparent in the value conflicts related to it. This is why value discussion should be diverse, at least from the standpoints of human dignity and equality. It is also crucial to climate change education that consumer habits are questioned and that learners are offered ways to act on climate change.



READ MORE

Cantell, H., Tolppanen, S., Aarnio-Linnanvuori, E. & Lehtonen, A. 2019. Bicycle model on climate change education: presenting and evaluating a model. Environmental Education Research, DOI: 10.1080/13504622.2019.1570487.

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CHAINS AND PEDALS: ACTION TO CURB CLIMATE CHANGE

In the context of climate change education, action means ways to act in everyday life. Even young learners can participate in action to mitigate climate change when they are encouraged and guided towards it.

WHEELS: KNOWLEDGE AND THINKING SKILLS

Climate change education often focuses on knowledge. However, gathering knowledge should not be an end in itself. Rather, knowledge should be used critically and to build new understanding through comparison and analysis. Multidisciplinary knowledge and thinking skills are necessary, but they should only form one part of climate change education.

LIGHT: HOPE AND OTHER EMOTIONS

Climate change discussion makes many people experience negative emotions, such as concern, fear, sadness, guilt, hatred and hopelessness. These emotions must be recognised because they affect learning. Instead of negativity, climate change education should spark hope and compassion. This can be achieved through positive actions, for instance.