Environmental lessons, their structure and rationale behind: SDG7 – Clean Energy

Maria Luísa Almeida & Rosa Doran
NUCLIO – Núcleo Interativo de Astronomia e Inovação em Educação

International inSTEAM Teachers' Conference "Inclusion in STEAM Class",
25th September 2021, online

Climate Change

*Clean Water
and its management*

Clean Energy

Lessons orchestration

- 6 Lessons that follow

    - Scientific approach (2)
    - Open Schooling approach (2)
    - Socioeconomic Impact approach (1)
    - Cultural Impact approach (1)

- Each lesson is a standalone activity, but they can also be used with others

Scientific Approach

Specific sources of energy are explored in detail

- **Renewable Energy-Good Winds**

Explores Wind Power

- **Renewable Energy-Here Comes The Sun**

Explores Solar Power

Open Schooling Approach

Communicate with the community

- **Renewable Energy Agents**

Students raise awareness about the energy crisis

- **Renewable Energy: Junior Ambassadors**

Younger students promote actions to help the transition to clean energy

Socioeconomic Impact & Cultural Impact approach

For the older students – socioeconomic impact

- Renewable Energy Activists

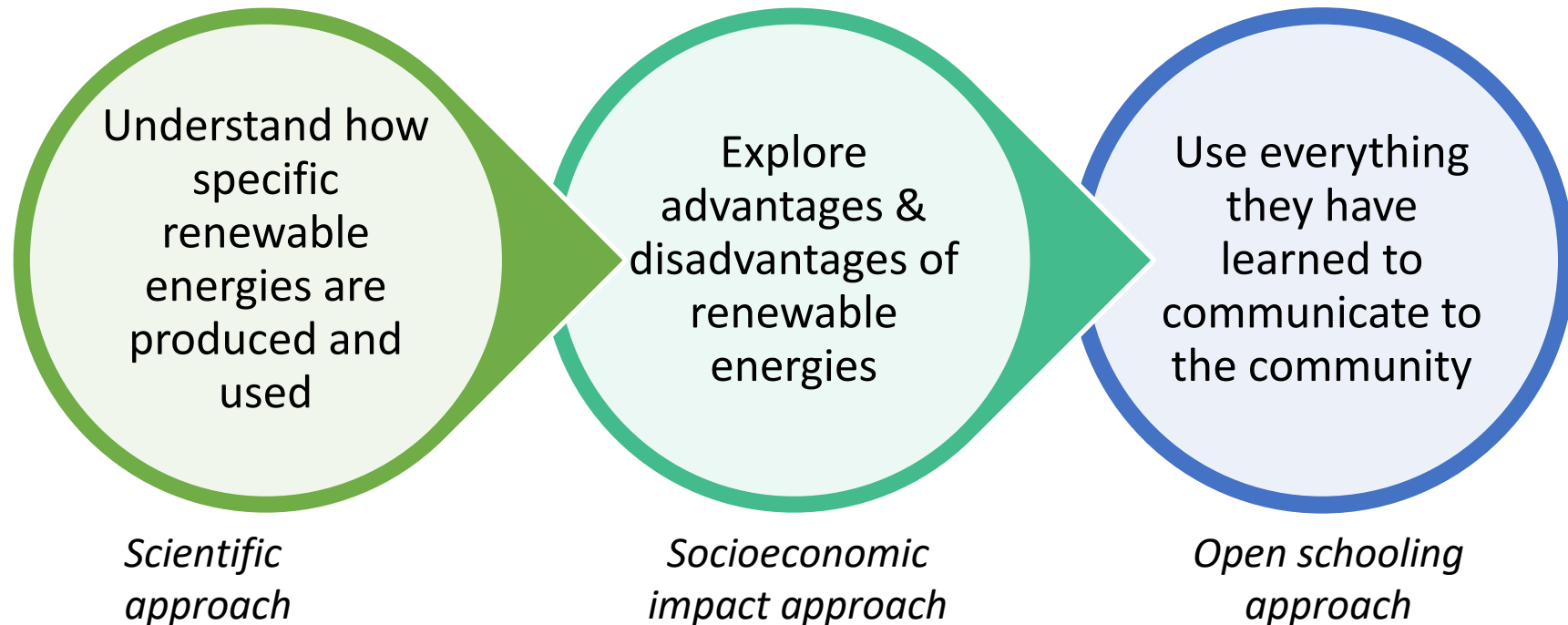*Students investigate the uptake of renewable energy in their country or region*

For the younger students – cultural impact

- Renewable Energy: Overcoming Cultural Barriers

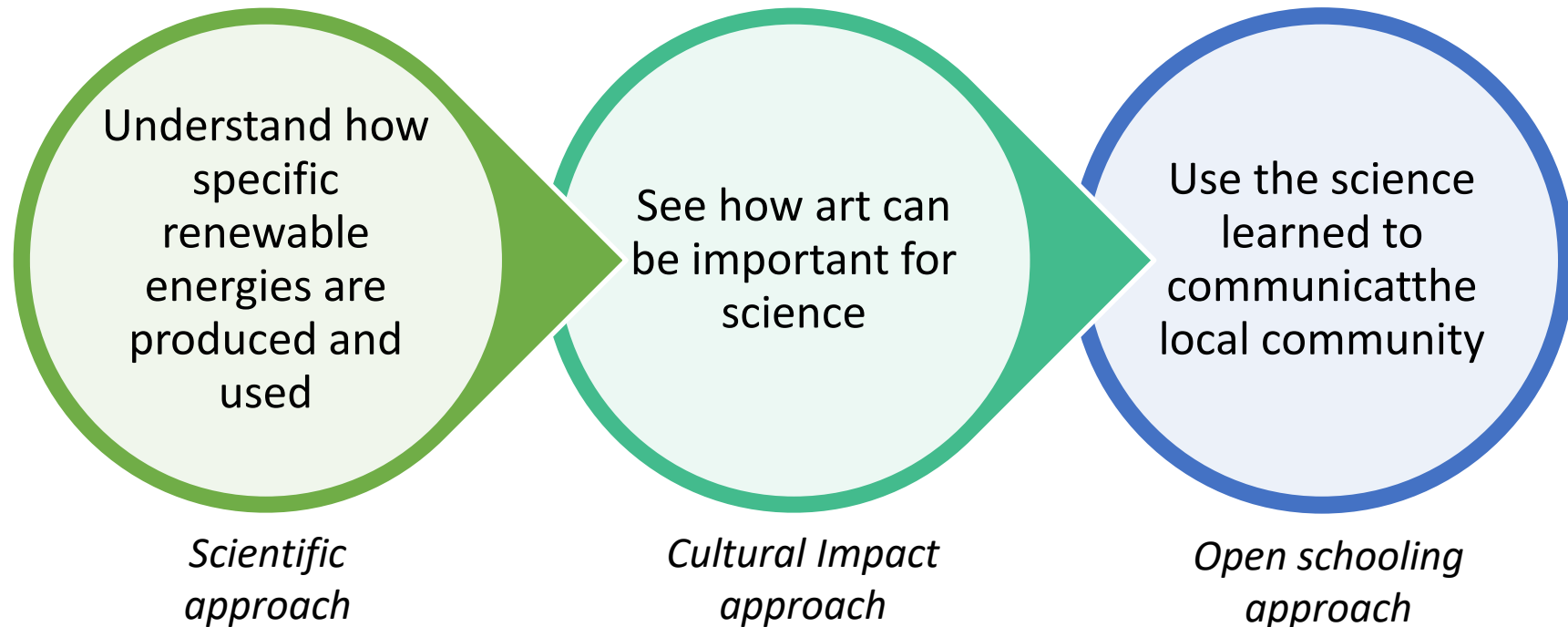*Students use art to overcome cultural barriers related to renewable energy*

Scientific Approach -> Socioeconomic Impact -> Open Schooling

Understand how specific renewable energies are produced and used

Explore advantages & disadvantages of renewable energies

Use everything they have learned to communicate to the community

Scientific approach

Socioeconomic impact approach

Open schooling approach

Scientific Approach -> Cultural Impact -> Open Schooling

Understand how specific renewable energies are produced and used

Scientific approach

See how art can be important for science

Cultural Impact approach

Use the science learned to communicatthe local community

Open schooling approach

ILS: **Energia renovável - Bons ventos**

(Renewable Energy-Good Winds)

Maria João Nascimento
Escola Secundária de S. Pedro – Vila Real (North of Portugal)

ILS implementation

Mathematics classes

Two classes of the 8th grade

40 students

Planned to be implemented using:

- Zoom with break out rooms

- Autonomous work & face-to-face

- Group work was priveledged

ILS implementation

- The teacher did the translation
- The teacher was always present for the students, at synchronous and asynchronous sessions because students didn't know the platform, nor the zoom breakout rooms
- The teacher was able to give feed back as students progressed
- The computer rooms at school were occupied; students sometimes had to use mobile phones

ILS implementation – overall experience

- Very gratifying to see the engagement of the students
- The inquiry methodology had a strong impact on the students
- Students stated that the activity developed their skills and that they felt they could go further
- Students with difficulties in Mathematics were very engaged and more successful than usual
- Using UDL was very important for the success

Thank you!

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