VISITOR
VIRTUAL MUSEUMS IN THE COVID ERA

LESSON PLAN

Evaporation Cooling - Secondary Science in France

Project Title	VISITOR (VIrtual muSeums In The cOvid eRa)
Project reference No.	2020-1-FR01-KA226-SCH-095600

Co-funded by the
Erasmus+ Programme
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Interactive 4D
Serious Games Labs

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Title of Lesson Evaporation Cooling - Secondary Science in France
Background *(What museum artefact are you using for your lesson ? What curriculum areas does your lesson address, (eg History, Science, Language, etc.) ? What age range is your lesson suitable for ? What pre and post activities do you envisage? How will the work be assessed ?)* Cite sciences et industrie (City of Science and Industry) https://www.cite-sciences.fr/fr/accueil/ Science lesson addressing energy transfer in cooling. Suitable for 11-14 years old. Prior learning on thermal insulators and thermal conductors (eg preventing ice from melting in cups and coverings of different materials). Follow-on work could consider how thermos flasks work (ie how does the 'double-layer' idea also keep things hot ? Work will be assessed by teacher observation, informal sharing of test scores, and quality of oral contributions.

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Learning Objectives (*What are the learning objectives addressed referenced to your own national curriculum ?)*

https://www.education.gouv.fr/les-programmes-du-college-3203

Le programme d'enseignement du cycle 3 s'organise autour de thématiques communes mêlant grandes questions scientifiques et enjeux sociétaux contemporains. Le découpage en quatre grandes thématiques s'organise autour de :

Matière, mouvement, énergie, information

The cycle 3 teaching programme is organised around common themes that combine major questions of science and contemporary societal issues. The division into four main themes is organized around:

- Matter, movement, energy, information

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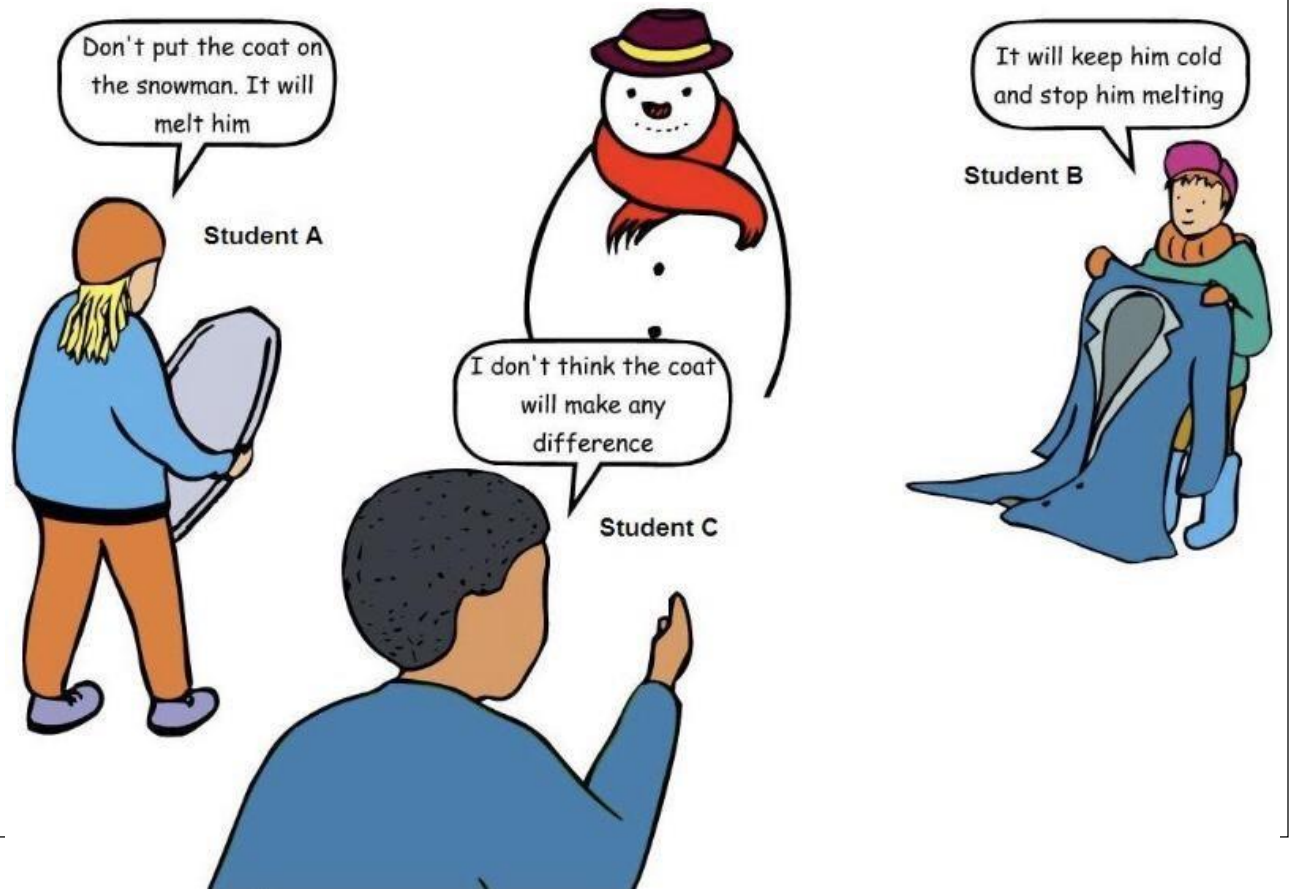
Lesson Starter *(First 10 minutes : How will you begin the lesson in an engaging way ?)*

Discuss the following image. Who is right ? Student A, B or C ? (The correct answer will be revealed at the end of the lesson !)



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Main Activity *(30 minutes : What is the task children need to do ? How are the children organized -pairs, groups, etc.? How is the work differentiated? What extension activity is there ?)*

https://www.cite-sciences.fr/juniors/froid-chaud/fabrique-un-frigo-du-desert.html

https://www.cite-sciences.fr/juniors/froid-chaud/quiz.html

First 10 minutes : Students start with accessing the above on Ipads. The first is how to make a desert fridge. The second is a quiz on heat, cooling, etc.

Next 20 minutes : Students in pairs make their own desert fridge. An apple is placed in each one at the end to be left until the lesson next week.

Plenary *(10 minutes : How will the children share what they have learned ? How will you link back to the Learning Objectives ? How will you link to the next lesson ?)*

Share answer to snowman problem (Student B is correct).

Discuss the purpose of the water in the Desert Fridge. What is the purpose of the cloth ?

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Resources *(What is needed to run this lesson (eg PowerPoints, Worksheets, Ipads, Internet access, Video Projection, Interactive whiteboard, etc.) ? Attach example documents and jpeg of artefact.)*

Ipads, Large and small plant pots without holes in the bottom, sand, water, cloths, apples.

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