

Principle	Description	lcon
1	Rosenshine 1 – (Daily) review Start each lesson with a repetition of previous material. Regular repetition reinforces what was learned and leads to more spontaneous recall.	(C)
2	Rosenshine 2 - New materials in small steps Present learning materials in small amounts. Accompany students with practice after each step.	
3	<b>Rosenshine 3 - Ask questions (onderwijsleergesprek)</b> They connect the new learning material with previous knowledge and practise it.	
4	Rosenshine 4 - Provide models Pupils can focus on the steps to solve a problem.	= ﴾
5	Rosenshine 5 - Guide student practice The best teachers spend a lot of time supervising the practice/learning of new material.	
6	Rosenshine 6 - Check student understanding (onderwijsleergesprek) By checking in between, pupils can learn the material with fewer mistakes.	<b>B</b>
7	Rosenshine 7 - Obtain high success rate Aim for the students to experience approximately 80% success in the exercises, questioning	
8	Rosenshine 8 - Scaffolds for difficult tasks The teacher provides temporary support that decreases as students become more competent.	
9	Rosenshine 9 - Independent practice Provide practice time in and out of the classroom so that the learned material can be automated.	¥•₩•┃•¥
10	Rosenshine 10 – (Weekly and monthly) review Pupils need to practise intensively in order to automate the material. Not necessary for this key study.	

Icons based on Rosenshine poster by Oliver Caviglioli







Step 1: Direct instruction / teacher facilitated stage - this is where schema building begins. Present new material.

Step 2: Modelling / Scaffolding, with review and questioning – what data are needed?

Step 3: Individual exploration

Step 4: Review - discussion

Step 5: Problem-solving

Step 6: Presentation/Assessment (Peer assessment possible too) and sharing of outcomes. This will

also be the stage where students may feel secure enough to start their own exploration.

= checking understanding













## CASE STUDY < AMBIENTAL PROBLEMS AND SUSTAINABLE CITIES> by Antonella

Step	Topic / story	Other	
	Ambiental problems and sustainable cities		
	Identification and solutions. The future of our cities		
	Curriculum context: Block 2 "society and territory".		
	Competence 2.		
	Basic knowledge: A: challenges of today's world		
	Target age group: 12 to 14		
LOs	Learning objectives		
	<ul> <li>Retrieve prior learning about cities</li> <li>Describe pollution problems</li> <li>Find out the main problems of pollution in your city</li> <li>Understand what the air pollution is</li> <li>Sustainable cities</li> <li>Describe, explain and evaluate</li> <li><b>3</b> GOOD HEALTH AND WELL-BEING</li> <li><b>7</b> AFFORDABLE AND CLEAN ENERGY</li> <li><b>11</b> SUSTAINABLE CITIES AND WELL-BEING</li> <li><b>6</b> LEAN ENERGY</li> <li><b>13</b> CLIMATE</li> <li>COMMUNITIES</li> </ul>		
Res	Key resources and embedded hyperlinks if appropriate		
	Kahoot, Videos, Instituo geográfico Nacional, ICA [		

	Learning phases (may be one lesson or a sequence of lessons)	Timing
0	Step 0: Retrieval (e.g. quiz to check prior learning)	min
C	<b>Review</b> In order to check if the have built the correct schema form the previous class, we will pass a short Kahoot, with some clue questions.	10

















	Soil contamination	Noise Pollution	
	the process of making something dirty	noise, such as that from traffic, that upsets	
	or poisonous, or the state of	people where they live or work and is	
	containing unwanted or dangerous	considered to be unhealthy for them	
	substances		
2.27	Ask questions:		
1	Questions: (ask to as much student as yo	u can)	
	<ul> <li>Can you describe with your word</li> </ul>	the 4 pictures?	
	<ul> <li>Which do you think is the situatio</li> </ul>	n in your city?	
	<ul> <li>What do you think are the most d</li> </ul>	lifficult to solve?	
	- Why?		
	The students are probably saying that the	e worst problem in Madrid is air pollution	
2	Step 2: Direct instruction		Min
2			30
-	Quality air map		
	Part 1.		
	We start showing them this map ( <u>https:/</u>	<u>/ica.miteco.es/</u> )	
	🔛 Aplicaciones 🌀 Google 🖸 (8) YouTube 🛄 Acceso al Campus 🏫 THAT'S ENGLISH 🥃 Diccio	nario Collins J 👓 ¡Preparâte el exame 🜀 Corrección 📧 Suit Academy 🥂 El examen de inglés 📙 CAM 🛛 »	
		Índice Nacional de Calidad del Aire	
	05/0//2022 14:00	Burdeos	
		Buena St	
		Form ia Monaco Razonablemente buena	
		Vitor ( 2 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
	Brage	Desfavorable	
	Oporto Sall onca	Muy defavorable	
	Aveto / Coimbro	Extremadamente desfavorable	
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	Lisboa OBadaoz	Paima	
		Must Pantani)	
	Albufera State	Argel	
	Faro	• نوشن - مدينة الجرائر	
	Google	Mar de Albordy Batna. Combineciones de teolas Datos de mapas ©2022 GeoBaile-DE/BKG (©2009), Google, Inst. Geogr. Nacional Términos de uso	
		- 36°C Soleado ∧ 4 00 👯 ಈ 🧟 ESP 05/07/2022 🗟	
	We move the map and focus on the red z	cones: we can appreciate that Madrid is not	
	the worst place.		
	Doub 2.		
	Part 2:		
	Focusing on Madrid, we are going to show	w what the official web page says:	

















	No2		
	03		
	PM 10		
	Etc		
Leros	, Obtain high success rate		10
	We are asking a couple of question:		
	- What is the air pollution?		
	Is when in the air there are materials or other com	ponents which can	
	cause some damage to the human health.		
	- When does this problem starts?		
	With the industrial revolution (that we have studie	ed) when humans	
	started to produce dioxide and other dangerous si	ubstances (connecting	
	With history)		
	Different type of illnesses as asthma or cancer to	humans and damages	
	to the environment	numans and damages	
	- How we can prevent that?		
		NDS NDS	
3	Step 3: Scaffolding Review and Questioning		40 min











	VIDEO: We are going <u>https://www.youtube</u>	to show a video about sustainable cities: e.com/watch?v=kOa4jzjWc6g	
	https://www.youtube.com/watch?v=kOa4jzjWc6g         Video: Ciudades sostenibles (Play Informe semanal, 2009).         Image: Solution of the second se		
	DEDATE: Drocontation	to the class the results	
1	<b>DEBATE</b> : Presentation	n to the class the results.	min
4	DEBATE: Presentation Step 4: Modelling and Basing on the answer	n to the class the results. <b>d Questioning</b> s of the student we start building a table with their collaboration	min 20
<b>4</b> =***	DEBATE: Presentation Step 4: Modelling and Basing on the answer	n to the class the results. <b>d Questioning</b> s of the student we start building a table with their collaboration	min 20
4 -****	DEBATE: Presentation Step 4: Modelling and Basing on the answer Environment	to the class the results. <b>d Questioning</b> s of the student we start building a table with their collaboration System formed by natural and artificial elements that are interrelated and that are modified by human action	min 20
4 -**** -***	DEBATE: Presentation Step 4: Modelling and Basing on the answer Environment Environmental	a to the class the results. <b>d Questioning</b> s of the student we start building a table with their collaboration System formed by natural and artificial elements that are interrelated and that are modified by human action concern for nature and each of its elements.	<u>min</u> 20
4 -**** ***	DEBATE: Presentation Step 4: Modelling and Basing on the answer Environment Environmental awareness	a to the class the results. <b>d Questioning</b> s of the student we start building a table with their collaboration System formed by natural and artificial elements that are interrelated and that are modified by human action concern for nature and each of its elements. the purpose is protecting planet Earth, how?.	min 20
4 -**** **	DEBATE: Presentation Step 4: Modelling and Basing on the answer Environment Environmental awareness CO2	<ul> <li>a to the class the results.</li> <li>d Questioning</li> <li>s of the student we start building a table with their collaboration</li> <li>System formed by natural and artificial elements that are interrelated and that are modified by human action</li> <li>concern for nature and each of its elements.</li> <li>the purpose is protecting planet Earth, how?.</li> <li>One of the natural gases which contribute to greenhouse gases (continue)</li> </ul>	min 20
4 -****	DEBATE: Presentation Step 4: Modelling and Basing on the answer Environment Environmental awareness CO2 Other gases Bangwahle anergies	<ul> <li>a to the class the results.</li> <li>d Questioning</li> <li>s of the student we start building a table with their collaboration</li> <li>System formed by natural and artificial elements that are interrelated and that are modified by human action</li> <li>concern for nature and each of its elements.</li> <li>the purpose is protecting planet Earth, how?.</li> <li>One of the natural gases which contribute to greenhouse gases (continue)</li> <li>methane, nitrous oxide (continue)</li> </ul>	<u>min</u> 20
4 -****	DEBATE: Presentation Step 4: Modelling and Basing on the answer Environment Environmental awareness CO2 Other gases Renewable energies	<ul> <li>a to the class the results.</li> <li>d Questioning</li> <li>s of the student we start building a table with their collaboration</li> <li>System formed by natural and artificial elements that are interrelated and that are modified by human action</li> <li>concern for nature and each of its elements.</li> <li>the purpose is protecting planet Earth, how?.</li> <li>One of the natural gases which contribute to greenhouse gases (continue)</li> <li>methane, nitrous oxide (continue)</li> <li>Energies obtained from natural sources (make exemples)</li> <li>They are considered a viable alternative to conventional energies and their environmental impact is reduced</li> </ul>	<u>min</u> 20
4	DEBATE: Presentation Step 4: Modelling and Basing on the answer Environment Environmental awareness CO2 Other gases Renewable energies Sustainable	<ul> <li>a to the class the results.</li> <li>d Questioning</li> <li>s of the student we start building a table with their collaboration</li> <li>System formed by natural and artificial elements that are interrelated and that are modified by human action</li> <li>concern for nature and each of its elements.</li> <li>the purpose is protecting planet Earth, how?.</li> <li>One of the natural gases which contribute to greenhouse gases (continue)</li> <li>methane, nitrous oxide (continue)</li> <li>Energies obtained from natural sources (make exemples)</li> <li>They are considered a viable alternative to conventional energies and their environmental impact is reduced</li> <li>System of economic, social and po progress capable of satisfying current</li> </ul>	<u>min</u> 20
4 -****	DEBATE: Presentation Step 4: Modelling and Basing on the answer Environment Environmental awareness CO2 Other gases Renewable energies Sustainable development	<ul> <li>a to the class the results.</li> <li>d Questioning</li> <li>s of the student we start building a table with their collaboration</li> <li>System formed by natural and artificial elements that are interrelated and that are modified by human action</li> <li>concern for nature and each of its elements.</li> <li>the purpose is protecting planet Earth, how?.</li> <li>One of the natural gases which contribute to greenhouse gases (continue)</li> <li>methane, nitrous oxide (continue)</li> <li>Energies obtained from natural sources (make exemples)</li> <li>They are considered a viable alternative to conventional energies and their environmental impact is reduced</li> <li>System of economic, social and po progress capable of satisfying current needs without compromising (continue)</li> </ul>	min 20
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4 -**** -**** -***	DEBATE: Presentation Step 4: Modelling and Basing on the answer Environment Environmental awareness CO2 Other gases Renewable energies Sustainable development Step 5: outcomes Chack student under	<ul> <li>to the class the results.</li> <li>d Questioning</li> <li>s of the student we start building a table with their collaboration</li> <li>System formed by natural and artificial elements that are interrelated and that are modified by human action</li> <li>concern for nature and each of its elements.</li> <li>the purpose is protecting planet Earth, how?.</li> <li>One of the natural gases which contribute to greenhouse gases (continue)</li> <li>methane, nitrous oxide (continue)</li> <li>Energies obtained from natural sources (make exemples)</li> <li>They are considered a viable alternative to conventional energies and their environmental impact is reduced</li> <li>System of economic, social and po progress capable of satisfying current needs without compromising (continue)</li> </ul>	min 20 min
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9









# Write definitions for these terms (add files if needed) (ANSWERS) Would be added the main concepts used on the vignette

Key term	Definition
	Suggestions for creating / research on a concept:
	You can do it! Where would you look for a definition? (you should consult more than one source) How would you define it? Consult several sources and define yourself in a maximum of 5-6 lines, knowing that the definition serves to clearly delimit the thematic, temporal and territorial scope of a concept. And enrich it, if appropriate, with the why, how, relations with other elements, behavioural patterns One or two examples and a significant image, graph or map should be added. Always without the defined word being part of the definition.

Concepts Cube to add: (see the ppt also and change these information with the cube after creating it)

### 1.Blue table - Working memory: Current learning schema

Write up to five key ideas for the lesson. As well as the main concept, add three or four other key ideas that will build towards the main concept. If you are NOT using a 4<sup>th</sup> additional concept then leave the row that starts with '4' blank.

#### 2. Green table - Long-term memory: Prior learning schema

Add up to nine items from prior learning that should already be part of the schema in students' long-term memory.

### 3.Red table - Long-term memory: Future learning schema

Add up to nine items that will be taught in future learning that will become part of the schema in students' long-term memory.











