



























Scenario Title: Personalisation - Topic: friction (CCL, Europe)

	 dream	 explore	 map	 make	 ask	 re-make	 show
Learning Activities	Free thinking, sharing ideas	Looking for and finding content	Structuring thoughts	Developing or practising	Interviewing/ Feedback	Revising	Performing and presenting
Time (weeks)	Depending on the subject Normally 2	Depending on the subject Normally 3/4	Depending on the subject Normally 1/2	Depending on the subject Normally 3/4	Depending on the subject Normally 1	Depending on the subject Normally 1	Depending on the subject Normally 1
Goal (learning outcomes, match to specification)	<p>Example subject and topic: To learn about the topic of friction in the physics curriculum.</p> <ol style="list-style-type: none"> One goal is to personalise teaching and learning. Another goal is to develop 21st century skills of problem solving, collaboration, and learning to learn. 		<p>The goal is to develop skills of self-discovery, curiosity, effective research, framing (re)search questions.</p>		<p>The goal is to learn about making videos.</p>		<p>The goal is to develop online publishing skills.</p>

							
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Description (of each learning activity)	<ul style="list-style-type: none"> debate the appropriate level of personalization as part of the scenario <p>Teacher:</p> <ol style="list-style-type: none"> presents the design brief and suggested success criteria; ensures that individualised learning experience corresponds to individual learning needs, learning biographies, and cognitive skills; 	<p>Teacher:</p> <ol style="list-style-type: none"> help students evaluate the information. <p>Students:</p> <ol style="list-style-type: none"> brainstorm ideas to cross learning boundaries, which promotes creative learning and knowledge integration; 	<ul style="list-style-type: none"> identify the learning issues for research that promote active learning and critical thinking <p>Teacher:</p> <ol style="list-style-type: none"> Teachers approve final ideas. <p>Students:</p> <ol style="list-style-type: none"> Mind mapping, charts/data; compare and contrast; mapping can take place in a flipped classroom; 	<ul style="list-style-type: none"> research to construct; action plans promoting new knowledge development drafting and redrafting; make the prototype. 	<ul style="list-style-type: none"> workshop to present; prototype and thinking to other groups (expert advisors, teachers) Feedback. 	<ul style="list-style-type: none"> reflect on feedback; agree on changes in the group; some tuition on what makes effective and useful feedback; remake the product (possibly in the flipped classroom). 	<ul style="list-style-type: none"> report research findings to the groups, promoting peer-to-peer learning to complete the final products; public exhibition of product; online exhibition of learning journey/process and end result e.g. make a video, blog, publish book, website, learning journal for whole project.

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Learning Environment/s (the physical or virtual setting(s))	as flexible as possible (home,	1. flexible, depends	classroom	1. linked to the product making can take place in a	1. school video conference/ Skype	linked to the product	school or special (relevant) location
	<p>Students:</p> <p>Discussing the problem scenario in groups, which promotes communication skills and cooperative learning</p>						
3. frame a 'big question' for each group (or class if appropriate) e.g. "Why are your hands warm when you rub them?"		2. data collecting; 3. research, e.g. searches.	4. groups decide on final product/outcome to be produced.				

							
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in which learning takes place)

hospital, school, outdoors, etc.)

on the problem

flipped classroom

exploration can take place in a flipped classroom

Digital Technologies and Tools

- **important to justify the need for 1:1 access to tablets, and their added educational value; focus on content, educational objectives, not form (tablets, tools)**
- Web 2.0 tools such as Team up for grouping and Reflex

- semantic web
 - Google
 - somewhere to record findings
 - exploit features of tablets rather than desktop computers
- Throughout: There must be an individual collection of resources in a personalized learning environment on the tablet, including**








- Mind mapping
- Spreadsheets
- Graphics
- Graphic organisers (chosen by students with direction by teachers)







- linked to product but camera to record progress



- presentation tools
- Multimedia
- Online conferencing

- Online test tools but depends on products
- Same as make

- show web content
- E-portfolio
- digital camera or video

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	<ul style="list-style-type: none"> • Google sites for eportfolios and learning journey • TACKK for blogging • VLE able to offer personal learning journey and info about individuals in class, e.g. Moodle • Woki (use of fun avatars) <p>personalised apps, content and/or learning activities.</p>						
<p>Roles (teacher, students, parents, experts, etc.)</p>	<p>Teacher: Teacher as facilitator and initial ideas/design brief. Teacher needs to be experienced and to work more creatively, unconstrained. Important to match activities to</p>	<p>Learning is personalised for students throughout, i.e. have clear and demonstrate innovative teaching and learning concepts that builds on the interests, needs and biographies of students and that</p>	<p>Students: as analysts/critics. Teacher: as guide.</p>	<p>Students: Students as creators, understanding the difference between plagiarised and original work. Individual roles within group.</p>	<p>Parents: as experts/advisors. Students: as presenters. Students could use expert peer tutors or mentors to scaffold their completion and</p>	<p>Students: as producers. Teacher: as assessor.</p>	<p>Students: as experts.</p>

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<p>timetable constraints.</p> <p>Students:</p> <p>Students as consumers and influencers. Age: over 10. It is important that the teacher knows each student well and has accurate information about their environment. Students should be highly motivated.</p> <p>Parents:</p> <p>Parents need to be engaged as this scenario takes free time after school,</p>	<p>used tablets for that purpose.</p> <p>Throughout: teacher must work together with the student to facilitate a differentiated learning experience, supported by personalised learning services e.g. tutoring, mentoring, or also personalised apps and learning spaces. Teachers can facilitate this process, e.g. through personalized learning environments.</p>			<p>Teacher:</p> <p>Teacher as guide, here ensuring that students are aware of plagiarism</p> <p>Experts: as advisors.</p>	<p>personalisation of tasks</p> <p>Specify how students will work with experts.</p>		<p>Performing and presenting</p>

							
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as supporters and supervisors.

Students: as researchers.

Experts:




Experts as creators of intelligent tools (maybe even present brief), check what is practical/possible, role models, judges.








Teachers: as guide.

Parents: for home activity.

Consider roles for gifted students and those with special needs.

Collaboration (team work)	1. learners could be divided into groups according to their learning styles e.g. using	1. research within teams 2. share with other groups and questions	1. teams explain their chosen method to peers and review and comment on	all team members have a personally defined role	1. all to present prototypes 2. everyone has a role	personal roles	Groups' activities could be combined with the other groups in
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<p>Learning Activities</p>	<p>Free thinking, sharing ideas</p> <p>Web 2.0 tools such as TeamUp</p> <p>2. collaboration could be face-to-face and Web 2.0 tools</p> <p>Features:</p> <ol style="list-style-type: none"> 1. understanding the profile of the individual; 2. use of data and understanding of students to inform the grouping of students; 3. grouping by similar starting points; 4. may work at different speeds; 	<p>Looking for and finding content</p> <p>question findings</p> <p>3. groups' internal collaboration activities could be applied</p> <p>Throughout: an individual learning plan or individual learning activities must be negotiated between the teacher and the student in the end of a teaching lesson</p>	<p>Structuring thoughts</p> <p>each other's work</p>	<p>Developing or practising</p>	<p>Interviewing/ Feedback</p> <p>3. everyone shares their involvement</p> <p>Groups' activities could be combined with the other groups in Discussion and Reporting.</p>	<p>Revising</p>	<p>Performing and presenting</p> <p>Discussion and Reporting.</p>

							
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- different resources may be available for different students;
- could be a different topic for different groups (different big question) depending on needs; differentiate work for gifted students and those with special needs.

Reflection (reflecting upon one's learning and reporting activity status and progress)	1. Teacher should ensure that personalisation recognises the value of prior experiences and learning biographies, and	1. Self-assessment and peer assessment Throughout: teacher must	1. Teacher assesses progress, skills and competencies so far. He ensures use of ICT is directed	1. Self-assessment Students develop a learning journal or an ePortfolio as well as use	1. Feedback from presentations 2. Reflection on feedback; implications for next phase	1. Check that project still meets the brief. 2. Personal assessment from advisors.	1. Build feedback loop into information published.
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AND Assessment (type, instruments)	<p>makes use of individual learning preferences.</p> <p>2. Teacher should communicate to the class how the project will be assessed.</p> <p>3. Students negotiate the success criteria.</p> <p>4. Use of taxonomy to help visualise the learning gained throughout the project e.g. Solo taxonomy or Anderson's revised taxonomy.</p>	<p>specify appropriate learning outcomes against which the student must collect evidence of achievement over a period of time, using ePortfolios or blogs.</p> <p>Define and provide examples of instruments to make the formative assessment.</p>	<p>to educational ends, not for itself (i.e. the aim is to learn about, for example, friction, not video and online publishing).</p> <p>2. Students involved in self-assessment and peer feedback plus response time.</p> <p>Teacher and students should be aware of copy-paste from the internet/ plagiarism,</p>	<p>personalized online services or apps to plan individual learning targets, learning activities and set their individual learning goals.</p>	<p>Students extend their learning by sharing with peers, teachers and parents as part of personalised learning conversations with explicit feedback.</p>	<p>3. Final changes needed.</p> <p>4. Teacher does final assessment of end product and process.</p> <p>Throughout: Students demonstrate their knowledge and skills by reflecting on their learning and adding artefacts to a digital portfolio.</p>	<p>Review progress against start points and targets.</p>

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5.Outcomes/success criteria negotiated.

6.Students/groups may enter the project at different points.

Target setting by students/groups in negotiation with teacher (may be different entry/exit points).

without learning taking place.

This scenario was originally developed within the [Creative Classrooms Lab](#) project, and has been edited for the purposes of the [Co-Lab](#) project. CO-LAB (December 2015 – January 2018) is coordinated by [European Schoolnet](#) (a network of 31 Ministries of Education aimed at bringing innovation in teaching and learning to key stakeholders within the education community), and funded by the European Commission’s Erasmus+ Programme.