Suggested planning tables developed by National and Kapodistrian University of Athens (NKUA)

<table>
<tr><td>Science topic:

(Relevance to national curriculum)

Class information

Year Group:

Age range:

Sex: both

Pupil Ability: e.g. (The scenario allows space for pupils of various abilities to participate)</td><td>Materials and Resources

What do you need? (e.g. printed questionnaires, téléconférence, etc.)

Where will the learning take place? On site or off site? In several spaces? (e.g. science laboratory, drama space etc.), or one?

Health and Safety implications?

Technology?

Teacher support?</td></tr>
<tr><td colspan="2">Prior pupil knowledge</td></tr>
<tr><td colspan="2">Individual session project objectives (What do you want pupils to know and understand by the end of the lesson?)

During this scenario, students will</td></tr>
<tr><td>Assessment</td><td>Differentiation

How can the activities be adapted to the needs of individual pupils?</td><td>Key Concepts and Terminology

Science terminology:</td></tr>
</table>

For further information on these resources please contact Dr Kerry Chappell
K.A.Chappell@exeter.ac.uk

Suggested planning tables developed by National and Kapodistrian University of Athens (NKUA)

		Artsterminology:
Session Objectives: During this scenario, students will		
Learning activities in terms of CREATIONS Approach		

IBSE Activity	**Interaction with CREATIONS Features**	**Student**	**Teacher**	**Potential arts activity**
Phase 1: **QUESTION:** students investigate a scientifically oriented question	Students pose, select, or are given a scientifically oriented question to investigate. *Balance and navigation* through *dialogue* aids teachers and students in creatively navigating educational tensions, including between open and structured approaches to IBSE. Questions may arise through *dialogue* between students' scientific knowledge and the scientific knowledge of professional	E.g. Engage with teacher's questions. Watch videos and use the web to explore evolution.	E.g. Will use challenging questions and the web (images, videos) to attract the students' interest in ….	

Suggested planning tables developed by National and Kapodistrian University of Athens (NKUA)

	scientists and science educators, or through *dialogue* with different ways of knowledge inspired by *interdisciplinarity* and personal, embodied learning. *Ethics and trusteeship* is an important consideration in experimental design and collaborative work, as well as in the initial choice of question.			
Phase 2: **EVIDENCE:** students give priority to evidence	Students determine or are guided to evidence/data, which may come from *individual, collaborative and communal activity* such as practical work, or from sources such as data from professional scientific activity or from other contexts. *Risk, immersion and play* is crucial in *empowering* pupils to generate, question and discuss evidence.			
Phase 3: **ANALYSE:**	Students analyse evidence, using *dialogue* with each other			

students analyse evidence	and the teacher to support their developing understanding.			
Phase 4: **EXPLAIN:** students formulate an explanation based on evidence	Students use evidence they have generated and analysed to consider *possibilities* for explanations that are original to them. They use argumentation and *dialogue* to decide on the relative merits of the explanations they formulate, *playing* with ideas.	.		
Phase 5: **CONNECT:** students connect explanations to scientific knowledge	Students connect their explanations with scientific knowledge, using *different ways of thinking and knowing* ('knowing that', 'knowing how', and 'knowing this') to relate their ideas to both disciplinary knowledge and to *interdisciplinary* knowledge to understand the origin of their ideas and reflect on the strength of their evidence and explanations in relation to the original question.		.	

Suggested planning tables developed by National and Kapodistrian University of Athens (NKUA)

Phase 6: **COMMUNICATE:** students communicate and justify explanation	Communication of *possibilities*, ideas and justifications through *dialogue* with other students, with science educators, and with professional scientists offer students the chance to test their new thinking and experience and be *immersed* in a key part of the scientific process. Such communication is crucial to an *ethical* approach to working scientifically.			
Phase 7: **REFLECT:** students reflect on the inquiry process and their learning	*Individual, collaborative and community-based* reflective *activity for change* both consolidates learning and enables students and teachers to balance educational tensions such as that between open-ended inquiry learning and the curriculum and assessment requirements of education.			

For further information on these resources please contact Dr Kerry Chappell
K.A.Chappell@exeter.ac.uk