CHALLENGE



CHALLENGE CARD

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The "Challenge" is the common thread that runs through the course which enables participants to work within teams to examine, re-imagine and respond to a subject/issue of contemporary society. It allows facilitators and participants to connect all the course's different elements/disciplines to a specific theme relevant to our world.



CHALLENGE



PROBE THE CHALLENGE

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How is the Challenge being explored at this stage? Create something tangible, which supports and questions thinking, reasoning and actions.



EMBODIED DIALOGUE

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Facilitators and participants ask curiosity–driven questions which lead to new ideas and then lead to more questions; it involves conflict, difference, challenge and inhabiting others' perspective, whilst engaging with the space in between perspectives; it can happen through words, movement, visuals etc.



INDIVIDUAL. COLLABORATIVE AND COMMUNAL **ACTIVITIES FOR** CHANGE

INDIVIDUAL, COLLABORATIVE AND COMMUNAL ACTIVITIES FOR CHANGE

Science, entrepreneurship and the arts involve individual passions but are inherently collaborative.
SciCulture encourages this within communal/small group engagement in problem-setting and responding with an emphasis on action and, where appropriate, activism to make change happen.





ETHICS AND TRUSTEESHIP

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Facilitators and participants consider the implications and complex impacts of their creative processes and products, engaging with felt knowledge and problem-solving; considering with empathy how they can act as trustees of their community's values, now and in the future.



TRANSDISCIPLINARITY

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Using the different processes of science, design thinking, entrepreneurship and the arts as needed to respond to problems and challenges, without one discipline dominating unnecessarily.



BALANCE AND NAVIGATION

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SciCulture promotes a balance between control/freedom, structure and openness, arts/science/entrepreneurship; facilitators balance stepping in with expertise and stepping back to provide space for questions and responses. Navigation is about acknowledging educational tensions and dilemmas such as assessment, educational marketisation, and resource/time pressures.





RISK, IMMERSION AND PLAY

RISK, IMMERSION AND PLAY

Facilitators create a safe environment allowing playful immersion in risk-taking. Aids include socialising, empathising, reducing feelings of hierarchy where possible, modelling playful behaviour, grounding the course in participants' real-life experiences, and often using the arts as an emotive starting point.

POSSIBILITIES

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SciCulture aims to create space for possibilities (broad or narrow as appropriate), opening multiple avenues in terms of thinking and spaces. This involves shifting from asking 'what is this' to 'what can I do with this?' to 'what if?' questions.



EMPOWERMENT AND AGENCY

EMPOWERMENT AND AGENCY

This involves empowering the participants, encouraging them to own both their questioning and mistakes, whilst helping them develop their skills and knowledge to act and respond. Facilitators encourage them to reflect upon and come to understand their creative processes, both shared and individual, perhaps over prioritising polished products.











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SCIENCE, TECHNOLOGY & SOCIETY

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Exploring the relationship between societal issues and needs on one hand, and how science and technology develop on the other, participants are encouraged to explore topics from a variety of different perspectives in an empathic way and to see dialogue between science/technology and society.



THEORY & PRACTICE

THEORY & PRACTICE

Theory and practice drawn from science, arts and entrepreneurship are brought into dialogue to explore their relationship: theory and practice support and critique each other, allowing empathy to become part of the process. Through research in practice, participants challenge assumptions and empathize with people and their different contexts.

REASON &

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In the reason-intuition strand of design thinking, intuitive and rational aspects of thought play off each other, critiquing one another to develop a deeper understanding of the issue. This is key to finding the essence of the problem that the design is addressing, working empathically to develop a response.







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SHORT LECTURE

SHORT LECTURE

These are blocks of approximately 30 minutes, in which information is shared by an expert through direct instruction as a stimulus for workshop and group sessions. The kinds of information shared might be based on knowledge within science, arts, entrepreneurial disciplines or direct instruction in a skill.

FACILITATED GROUP TIME

FACILITATED GROUP TIME

These sessions are facilitated by expert instructors, ideally from different disciplines. Participants have the opportunity to work in their groups on their own project, but with the support of the facilitators 'stepping in and stepping out' to ask questions, offer support or provoke thinking. Facilitators need to actively listen.



INDEPENDENT GROUP TIME

INDEPENDENT GROUP TIME

Participants work in groups not supported by facilitators, in order to develop their own experiences in the various design thinking stages. They deal with this as individuals and/or a team.

CO-CREATION WORKSHOP

CO-CREATION WORKSHOP

Here people work together in an open way by asking diverging questions to stimulate others to deepen their thinking. Artifact creation may help team interactions to allow them to simultaneously think and do.



PRACTICAL WORKSHOP

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Practical workshops offer a 'hands-on, minds-on' approach to learning about specific content, ideas or processes that may be situated in any SciCulture discipline, or transdisciplinary in nature. In engaging practically with materials, participants are prompted to make connections between the observed/experienced and the main challenge card.



MAKING-BASED REFLECTION TIME

MAKING-BASED REFLECTION TIME

A logbook is a means for making-based reflection. The logbook can take many forms: large paper sheets, books, 3D shapes, mood boards, movable walls, images, etc. groups use logbooks to keep track of their thinking, reflections and their progress.



SOCIAL ACTIVITIES

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Social activities offer opportunities for participants to mix across groups and nationalities. They encourage discussion and informal engagement of the questions, ideas and solutions being explored in the course, as well as a chance to relax and enjoy each other's company.



FIELD TRIP

FIELD TRIP

These involve hikes up mountains, museum visits, swims and other fun activities outside the main educational building to help contextualise ideas within where the course is being held. The participants can work, play and discuss with others.



REFLECTIVE TIME

INDIVIDUAL REFLECTIVE TIME

Opportunity to take time to think and reflect on your own is important in an intensive experience. Using an individual reflective journal one can track one's own thinking and progress.





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ONLINE COLLABORATION

VIRTUAL TEACHING TOOLS

ONLINE COLLABORATION

Using tools such as padlet, mural or onenote, provide opportunities for learners to work together, either synchronously or asynchronously. This may be facilitated by a tutor, or independently.



VIRTUAL TEACHING TOOLS

INTERACTIVE PRESENTATION

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INTERACTIVE PRESENTATION

Using tools such as mentimeter, or simply chat responses, emojis or raising hands within an online synchronous meeting platform, encourages learners to respond to directly taught content to enable tutor response and to open space for dialogue and reflection.



VIRTUAL TEACHING TOOLS

VIRTUAL LEARNING GAMES VIRTUAL TEACHING TOOLS

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Using pre-sourced digital games to provide learners with a fun place to learn together. Discussion about the learning can take place following gameplay facilitated by a tutor.



VIRTUAL TEACHING TOOLS

VARYING
GROUP SIZES

VARYING GROUP SIZES

Switching between whole group and breakout group modes can facilitate opportunities for discussion in an online space, mirroring a 'think, pair, share' strategy.



VIRTUAL TEACHING TOOLS

CONNECTING VIRTUAL AND PHYSICAL

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In smaller groups, learners can work creatively to respond to each other in synchronous online meetings using gesture, movement and physical artefacts as well as faces and words.



VIRTUAL TEACHING TOOLS

BLOGGING AND ONLINE FORUMS

VIRTUAL TEACHING TOOLS

BLOGGING AND ONLINE FORUMS

Ask participants individually or collaboratively to write a blog about their challenge and response - ask others to comment on it and debate it with them.





WIKIS

Ask home groups to build a Wiki together around their challenge and response as a means to see it at a distance and think what it might look like 'from the outside'.



NEW TOOLS

NEW TOOLS

Explore new digital collaboration tools – there are more of these becoming available all the time!



ONLINE PRESENTATION

ONLINE PRESENTATION

Using an online meeting room such as Zoom or Microsoft teams allow students to show their pre-set work and discuss it. This can be a performance piece, artefact, picture, video, audio piece or piece of writing.





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CORE TEAM

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The Core team are the expert instructors drawn from different disciplines who plan, support and facilitate the course.



SUBJECT EXPERT

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Subject experts are outside experts invited to offer disciplinary insights into a specific topic.

Experts can be local and attend physically or join virtually.



LOCAL PROFESSIONAL

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Local professionals are invited to join the course to offer a professional perspective with contextual and/or disciplinary insights into the specific topic for the course. Examples include professionals from local social enterprises, businesses, design clusters, maker spaces etc.



PARTICIPANTS

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'Participants' refers to the students on the course, in the SciCulture course we acknowledged that participants also facilitate learning from each other, and the core team/experts are also learners.



STAKEHOLDER

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Stakeholders refer to people who have an interest or concern relevant to the Challenge card. They are invited to give insights to the course. Examples might include community leaders, teachers, local government officials etc.



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MIXED ACROSS GROUPS

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In this grouping mode, participants are mixed so that they are working with others who are not from their home group.





WHOLE GROUP

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Whole group refers to teaching all of the course participants as a single group.







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SCIENTIFIC

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Scientific perspectives draw on scientific ideas and processes, including practical inquiry, and history and philosophy of science as well as scientific methods and knowledge. They should aid reflection, thinking and exploring of the challenge.





TECHNOLOGICAL

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Technological perspectives consider the application of technology to enhance human's ability to influence and alter others and their environment. These perspectives trigger reflections about innovation and the future. They enable critical exploration of the role and potential that technology plays in shaping the future.



ARTISTIC

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Artistic perspectives enable diverse insights; reflecting on the challenge in ways that are embodied, performative and responsive. Explore the challenge via dance/choreography, participatory theatre, spray-paint animation, installation art, stand-up comedy style socials, poetry or other forms.





ENTREPRENEURIAL

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Entrepreneurial perspectives are practical and realistic. They innovate by finding solutions to problems. An entrepreneur spots opportunities to develop new or better products and services to turn into profitable and socially aware businesses.







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QUOTES

WILD CARDS

QUOTES

"Don't forget science and arts are both creative"





MOTIVATIONS

WILD CARDS

MOTIVATIONS

"What music might you listen to while you're working"





UNEXPECTED SUGGESTIONS

WILD CARDS

UNEXPECTED SUGGESTIONS

"Read an online newspaper headline – how does it influence what you're doing?"





INTERRUPTIONS

INTERRUPTIONS

"Open the Space of the workflow by readjusting group roles, changing the question or direction of the planning"







WILD CARDS

LOOK UP/GO OUT

"As a team go for a walk outside look up and find things that you've never noticed before. Come back and see where you might go next with planning".





VISUALS

WILD CARDS

VISUALS

"If you can't put 'what next' into words - try doodling it or finding an online image that sums it up"





METAPHORS

WILD CARDS

METAPHORS

"Think of metaphors/similes that might help you think about the stage of planning that you're at -Ben Okri (poet) talks about needing to be like 'adaptive mariners'; what metaphors might help you plan what's next?"





RANDOMNESS

RANDOMNESS

"Pick any book from your shelf, open a random page and point your finger to a place on the page - how does that word help you to move on?"





OPEN SPACES: GESTURE

OPEN SPACES: GESTURE

"Make hand gestures, while you imagine how your course feels".





OPEN SPACES: MOVE

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"How does your course move: linear, pulse, acceleration, drag, curve, angular"





OPEN SPACES: DRAW

OPEN SPACES: DRAW

"Draw a (abstract) landscape that resembles your course, is it worth a visit?"





SLIDING

SLIDING

"Generate enough distraction to gain focus"





AGILITY

AGILITY

"Value the gaps between the layed out cards in front of you, this rough meaningful connections trigger your agility."





EMPATHY

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"Can you describe this from the viewpoint of the person opposite you?"









WHITE SPACES CARDS

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