Agents of Change Toolkit

Serious Games to progress schools towards Sustainable Development Goals

Sustainability Subject Swap

During this playful activity, teachers from different subjects work together to generate creative ideas for sustainability teaching. During the activity, teams of teachers design an activity in a short period for a different subject or age group than the one they normally teach. This creates a sense of "we're all in this together" and designing for someone else and in a short time is a funny activity can help overcome the perfectionism which can be an obstacle to starting.

It aims to help overcome the barriers of heavy workloads and compartmentalisation by showing that something can be achieved together in a short time, and by connecting teachers into new, supportive networks, so that they can progress their sustainability teaching faster than would be possible with a top-down approach.

This playful activity fits into the ACT change model Step 4 – Enactment.

Who?
Teachers

Where?
Any available space (an empty classroom would be perfect)

When?
After timetabled classes – a voluntary 1-2 hour session

What?
Fun, collaborative design session

Instructions for Sustainability Subject Swap

You will need

- Paper
- Pens
- Scissors
- Various art supplies and game parts (glue, tape, dice, counters, paper, post-its, cardboard boxes… you can also ask participants to each contribute some)
- Timing device (e.g. mobile phone)
- Design Guide printed out for each group (at the end of this document)

How to play

Setup

1. Lay out all the art supplies etc. on a table at the side.
2. Arrange the room to have one table / workspace per 2-4 participants.
3. Allocate participants into groups of 2-4 (try to group the participants by the subjects or age groups they teach to begin with).
4. Write the subject / age-group that each group teaches on a piece of paper and put in a tub.

Steps

1. Welcome everyone to the session.
   a. Optional ice-breaker: for example, ask each person to make a comedy animal or monster out of the art supplies in 2 minutes and create a superhero team for each table to share with the wider group – or use your own favourite icebreaker activity.
2. Teams draw at random a slip of paper with a subject on it (redraw if they get their own).
3. Explain that each team will be creating an idea for a sustainability classroom activity as a gift to the team who teaches the group on their piece of paper. Guidelines for this are provided in the Design Guide at the end of this document.
4. Set the timer for 30 minutes and let the teams create their activities.
5. Ask each team to "present" their gift activity to the team who teaches that group and allow space for constructive suggestions and further development of the idea.
6. (Optional) Mix the teams and repeat.
7. Call a vote on the best idea(s) to take forward (optional: award a prize).
8. Close: thank everyone, introduce teachers to places to find sustainability teaching materials[1] (such as those on the ACT Toolkit website) and discuss how the ideas from the session will be shared and developed (internal online space, website, noticeboard…).

Facilitation tips

- Try to be as fun and "silly" in your facilitation as you can – no-one should feel that they're under pressure to produce a completed activity in this session. They only need an idea.
- If teams get stuck, encourage them to go to the resources table and bring back something, then work that into their activity.

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[1] https://education.gov.scot/nelo/search/?query=sustainability&phase=BGE&orderBy=dateDescending
https://en.unesco.org/themes/education/sdgs/material
https://www.baesi.org/sustainability-education-resources/
https://www.teachstarter.com/au/blog/15-sustainability-activities-and-ideas-for-the-classroom/
https://se-ed.co.uk/edu/resources/
https://www.rsgs.org/lesson-plans

Game adaptations

This mechanic could work equally well for other similar adaptations, where designing something for someone else can help to promote connectedness between different groups. Examples of adaptations could include:

- A primary school creates mixed groups of teachers, pupils and parents to design activities together to welcome new starters to the school. They each share their different experiences of either how they felt when starting in P1 (pupils) or what they observed in others (parents, teachers). ACT THEME: *Communication and building relationships*.
- Two nearby schools each design a climate action activity for the pupils in the equivalent classes from the other school, utilising the protégé effect. ACT THEME: *Communication and building relationships*.

Understanding "Sustainability Subject Swap" better

Game purpose

The overall purpose of this game is to help teachers across subjects and age groups engage with sustainability, by overcoming barriers including heavy workloads, compartmentalisation and overload with lots of "new" approaches and initiatives. It fits into the ACT change model Step 4 – Enactment. The game is specifically intended to support teachers directly, recognising that top-down approaches to sustainability in classrooms are often slow, and that many teachers are extremely motivated to bring sustainability ideas into their classrooms, but might lack time, energy or other resources needed to do it.

Desired change

The primary desired change was "To persuade colleagues in my school and beyond to engage with sustainability no matter what their subject or what age of pupil they teach" which falls under several of the ACT priority areas but is particularly relevant to *Acting as agents of change within the confines of existing heavy workloads*.

Instructional design

The instructional design is focused mainly on getting teachers to work on each others' problems, in order to create a sense of common responsibility and to make a start on incorporating sustainability so that teachers feel empowered to continue.

Intended Learning Outcomes

- Recognise sustainability teaching as an important common responsibility
- Feel able and motivated to teach sustainability
- Be aware of materials available online and apply these
- Support each other to build sustainability into teaching
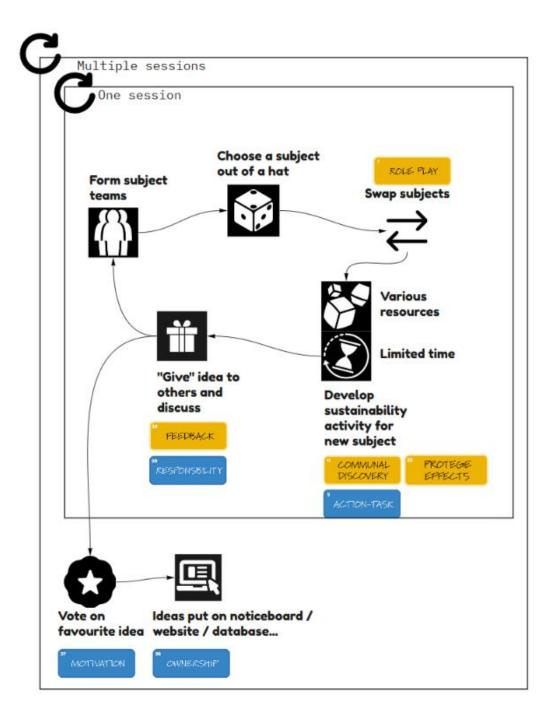
Desired Learning Behaviour

- Recognise that teaching sustainability is teachers' responsibility and use the resources that are available to fulfil this in the classroom.

Specific learning mechanics are captured in the gameplay loop diagram below.

Gameplay loop

The below diagram shows the gameplay loop for this activity. Specific learning mechanics are shown in blue and specific game mechanics are shown in yellow.[2]

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[2] For more on the game design framework being used here, see Arnab et al (2015) Mapping learning and game mechanics for serious games analysis. British Journal of Educational Technology, 46, 391–411.

The core loop is around repeatedly taking on other's problems, both creating a sense of shared responsibility and practising activity design without perfectionism (short design time plus designing for another subject makes perfect impossible, lowering pressure). Over several iterations the game would produce a selection of new ideas which could be added to existing sustainability resources. Through this process teachers would come to have increased awareness and ownership relating to resources available for sustainability teaching.

Credits

Sustainability Subject Swap
Design Guide for teams

Goal
Come up with an idea for a sustainability classroom activity for the subject and/or age group on the slip of paper you drew out of the house.

! You don't need to completely develop a lesson plan or materials – the goal is just to come up with an outline of an idea.

Getting started
You can start by choosing one of the SDGs below and linking it to the subject area you have chosen as a theme for your activity.

→ E.g. "the chemistry of healthy eating" or "gender equality in music"

Your activity
→ Can last for one or more classroom sessions
→ Should use inexpensive, common materials
→ Should be possible for one teacher to run for a whole class

Stuck?
→ Have a look at the materials available to you – pick one and think "How can we create an activity using this?"

! Don't worry if you don't know much about the subject – that might help you have more creative ideas, and it's part of the fun.

What to present
2 minutes to explain how your activity would work – if you have anything you've drawn or made to show, even better!