



Agents of Change Toolkit

Serious Games to progress schools towards Sustainable Development Goals



Pass the Cake

This is a gamelike playful creative activity, aimed at strengthening the social ties between parents, children, and teaching staff. The main tasks involve parents and children teaming up to engage in small creative projects (arts and crafts, cooking, writing, etc.) with teachers as facilitators, and subsequently presenting and discussing their creations in a group. This familiarization activity can be organized in a variety of ways depending on the requirements— remote or with physical presence, during school or after-school hours, aligned with parents evening or in an independent context, and regular or one-off (or in any frequency suitable for your school.)

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

**Who?**

Teacher and class in parent-child pairs

**Where?**

In school facilities with physical presence or any combination of locations with digital connectivity

**When?**

45' sessions, during school or after school hours and at any frequency, as suitable

**What?**

A different bundle each time depending on the activity, including tools and materials

You will need

Each creative activity requires a different bundle of materials and tools. Creative activities may include cooking, arts and crafts, simple science experiments, activities related to the Sustainable Development Goals, etc. The teacher/facilitator is responsible for putting together a list of proposed materials, tools, and instructions for the activity. The facilitator should also prompt players to include materials or tools of their choice or to improvise with what is available. It should be considered whether materials should be provided for participants, especially if there is a risk some families may not be able to buy/access the materials. The list below provides indicative creative activities to draw inspiration from:

- Found-in-my-backyard-materials sculpture
- No-mixer cookies
- Spaghetti and marshmallow building challenge
- “View from my window” drawing or painting
- A fictional story about the closest (natural/cultural/historical) monument
- “Egg into any animal!” craft challenge
- Felt-tip pen and tissue paper chromatography¹

How to play

Setup

The teacher communicates the topic of the next creative activity to the potential participants, using usual communication channels, including time, duration, and location (or digital platform with login instructions). The teacher should include the sample list of materials and tools needed and the instructions. Optionally, the teacher may offer technological support to the participants on using the digital platform of choice.

During session

Demonstration phase

The teacher demonstrates the activity in brief (c.5’) giving tips and tricks, alternatives and examples.

Creative phase

Each team of parent-child goes together through the activity (c.30’) taking shared design decisions, following the given instructions, and improvising as desired.

Discussion phase

All teams gather to showcase their creations and have a free-form chat (c.15’). If physically co-located, cake (or similar treat) could be distributed to the participants. If remotely connected, participants may be prompted to reward themselves with a small treat or sticker. During the last 5’, the teacher invites the teams to vote on the creations using a descriptive characteristic (e.g. “most colourful”, “most imaginative”, “most intriguing”, etc.) (Avoid creating ‘winners’ and ‘losers’.) The awarded team is invited to propose the topic of the next creative activity. If the team feels confident enough, they can also demonstrate the activity at the next session instead of the teacher. If the activity is being run as a one-off it is recommended to have several awards, document the creations, and share across the school community.

¹ Teachers will already be familiar with various suitable activities and lists of ideas however it is worth noting the huge range of science-related ideas at <https://www.stem.org.uk/resources> and the ‘Global Goals’ activities at <https://scotdec.org.uk/resources/explore-the-global-goals-17-activities-for-primary-schools/>

Game adaptations

This activity was designed under COVID lockdown conditions in order to maintain social ties despite physical absence from the school facilities. Beyond COVID, the digital communication format can be suitable in situations with large geographical dispersion, inadequate transportation means, or conflicting time schedules in the community. When possible, this activity can be located in the school facility with physical presence, which reduces logistical challenges, removes technological and financial barriers, and offers improved social dynamics.

Understanding “Pass the Cake” better

Game purpose

This game is about introducing social creative time between parents and their children, as well as between teacher and parents and across families. Expected outcomes of this are stronger community ties and higher likelihood of participation in similar community events, which contribute to improved community resilience. Within the ACT change model, this game falls under Step 4 - Enactment, since it provides a playful framework to facilitate social change.

Desired change

A primary desired change is strengthening or “rebuilding connections to reduce social isolation and reduce the inequity gap”, falling under the “Communication and building relationships” ACT priority area. Related challenges to this include geographical and social isolation, difficulties in connectivity skills (via digital means and/or in person), and mental wellbeing issues among the community.

Instructional design

The instructional design of this activity uses a hands-on action/task as a practical framework to open and drive freeform discussion among the participants, which is the main method through which the desired change takes place. Within the framework of the activity, the participants will need to make joint decisions, express ideas and publicly provide their opinion on matters, all of which allow for representation and familiarization among them. The activity is also intentionally loosely designed, so it incorporates free space to accommodate emergent behaviours and events.

Intended Learning Outcomes

- Cultivating a positive outlook towards community networking among the participants
- Reinforcing trust and familiarity within the group
- In cases of remote connectivity, familiarizing the participants with the technological means for digital communication

Desired Learning Behaviours

- To take joint decisions between parent and child
- To express and share opinions and suggestions in a group format
- To take the lead and publicly propose a group activity
- To take the responsibility of organizing and guiding the group through the suggested activity

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

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.



Class gathers and forms parent-child teams.

Presentation



3 DEMONSTRATION

The facilitator (teacher or player) presents the creative activity in rough outline.

Creation



5 ACTION-TASK 4 COLLABORATION
15 REFLECT-DISCUSS
25 OWNERSHIP

Each team discusses and creates their project using the provided props and/or other material contributions, according to their instructions and their design improvisations.

Discussion



4 PARTICIPATION 56 REWARDS/PENALTIES
31 INCENTIVE 56 METAGAME
18 REFLECT-DISCUSS 7 GOODS/INFORMATION

Upon completion, everybody gets cake to celebrate their participation. During cake time, teams discuss their creations and share comments and ideas.

Voting



33 COMPETITION
27 STATUS 30 RESPONSIBILITY

All teams vote using each time an appropriate creative parameter. The awarded team can name and optionally lead the next creative challenge.

This activity focuses on engagement with a creative task, where the artistic and technical aspects provide hooks for discussion within the team, hence it is important that the activity instructions allow room for experimentation and ownership from the side of the participants, instead of simple execution or shadowing. Variations across the teams' designs likewise can provide material for discussion within the group and it is advised to drive the momentum into incorporating topics tangential but external to the activity space in an effort to facilitate social connections. The metagame incentive of the cake is a symbolic reward for participation in the activity and a symbolic

celebration of the completion of the artistic task. Although there is a final comparative stage to this activity, there is no learning mechanic tied to the 'competition' mechanic, nor is it strongly promoted, rather the emphasis is on description of the creations as a form of group expression and engagement (through considered voting). The result provides a special status to one team (or more) which is tied to a responsibility for suggesting and optionally guiding the next activity, thus breaking the barrier between facilitators and participants.

Credits

This game was co-designed and developed by Shelagh Illingworth, Isean Gibson, and Olga Chatzifoti as part of the Agents of Change Toolkit project funded by the Scottish Universities Insight Institute. Explore the whole toolkit at <https://teacher-act.net/>

