Agents of Change Toolkit

Serious Games to progress schools towards Sustainable Development Goals

1.5Max Schools Summit

This series of activities was developed as a 3-day event for secondary pupils to run at the time of COP26 (though the activities can also be run individually). Pupils learn about what has been done to combat climate change in the past, analyse the current situation and make suggestions on what the next steps should be. During the activity, pupils create a set of products featuring their voices and thoughts, from posters to videos, which can be shared and disseminated. The last day also encourages each participant to make a personal pledge towards creating change in their family or community.

The activity series spans Steps 1-4 of the ACT change model: aims, outcomes, actions and enactment.

There is a website specifically to support these activities at: www.1.5max.org (launching summer 2021).

Who?
Secondary school pupils.

Where?
In the classroom, with some activities encouraging pupils to make videos which they could potentially do outside the school.

When?
As a 3-day off-timetable event, or during class time as stand-alone activities.

What?
A series of creative and reflective activities looking at various aspects of climate change.

Activities

Video Stories with Menti (~20 minutes)

This activity can be used with any short video about climate change. A series of videos will also be made available with the rest of the 1.5 Max resources, featuring a variety of speakers. In this activity, pupils watch the videos and use the Menti app to record their reactions as they watch the videos.

You will need

- A Menti account (free to set up)
- A projector
- A 5-10 minute video (from the 1.5 Max resources or elsewhere)

Instructions

1. If you are using Menti for the first time, familiarise yourself with it before the session.
2. Have the Menti text poll and video set up before the session starts.
3. Introduce the video and ask the class to enter the Menti code for your poll into the Menti website (www.menti.com) on their phones, laptops or tablets.
4. Ask everyone to put three words or short phrases into the Menti poll that describe what they feel or think as they are watching the video. Tell them that these will be displayed later but are anonymous.
5. Play the video.
6. Once the video has finished, open up the Menti word-cloud showing the reactions and discuss these.

COP themes activity (~1 hour)

COP26 is based around 5 themes. In this activity, pupils think about what themes they would have at a climate summit and then compare these with the COP26 themes.

You will need

- 1 set of 10 themes cards for each group of 3-6 plus 1 set of 5 COP26 theme cards (available to print at the end of this document)
- Blutack or tape

Instructions

1. Split the group up into groups of 3-6.
2. Give each group a set of themes cards.
3. Ask each group to decide as a group on the 5 themes they would have at a climate change conference.
4. Once the groups have decided, ask them to stick their themes up on a wall or board at the front of the class.
5. Have a discussion about these – are they all similar, or different?
6. Give the cards back. Now briefly explain what the COP26 is, and ask the group to guess what the COP26 themes are, and again to stick them up on the wall.
7. Reveal the real COP26 themes. Again, discuss – are there any surprises?

Country comparisons (~ 1 hour)

Just as countries will be affected differently by climate change, there are different things they can do to fight it. By making comparisons among a set of 10 countries, this activity looks at countries' contributions to climate change and to climate action and seeks to question stereotypes.

You will need

- Country fact-files printed out (available through 1.5 Max)
- A numberline drawn on a whiteboard or blackboard
- 11 sticky notes labelled with the country names: China, Costa Rica, Gambia, India, Morocco, Russia, Saudi Arabia, South Africa, UK, Ukraine, USA.

Instructions

1. Split the class up into 11 groups (2s or 3s) and give each group one sticky note with a country.
2. Ask the class to stick the sticky notes onto the numberline from lowest to highest population (without looking at the fact sheets).
   - **Variation:** it there is space, get the groups to stand in a line in the correct order themselves, holding up their sticky note.
3. Now give the class the fact sheets (one to each group to match their sticky note) and get them to order the countries correctly. Were there any surprises?
4. Repeat with other measures on the fact files (adapt based on the subject area and age group).
5. For older groups – if there are surprises, give them time to look through the factfile or use other sources and suggest reasons for the surprises.

Climate solutions make-a-thon (0.5 – 2 days)

In this activity, pupils explore climate change mitigation strategies by making a variety of "products" (posters, models, videos…) based on them.

You will need

- Product cards (available at the end of this document).
- Mitigation strategy fact cards (available through 1.5 Max, or you can make your own (for example based on "39 Ways to Save the Planet")).[1]
- Craft materials, paper, access to music or video equipment if possible.

Instructions

1. Lay the mitigation strategy cards out on a table at the side. Lay one set of product cards next to them, and put another set in a bag as the "lucky dip".
2. Explain that the challenge is to choose the strategies the class thinks are best for combating climate change, and make products promoting them.
   - There will be 1 point per product – 2 if the product card came from the "lucky dip"
   - The aim of this game is for the whole class to score as many points as possible.
3. Split the class into groups of 2-4 and ask each group to come to the table and pick one mitigation strategy card and one product card. For double points they can "lucky dip" the product card.

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[1] https://www.bbc.co.uk/programmes/m000qwt3

4. Set each group to work on preparing their product. When you're satisfied they've finished, they can take another set of cards.
5. At the end, count up the score (if multiple classes can do the challenge and compete, even better), and display the products. If there are several classes, they could also vote on the best products overall.

Running the game as a 3-day event

The event can be run over three days, with the following suggested schedule. Each day consists of two "video stories" with responses over Menti and then analytical or creative activities. During the last two days the pupils are engaged in making products expressing what they have learnt and thought about.

For context, this schedule was developed for a cluster of several schools running the event as a summit with 16 pupils from each school taking part. The schools were joined into teams of 3 schools, so each team had 48 pupils from 3 schools. In a single school, a class could be a team.

Day 1	Day 2	Day 3
Intro Video Story with Menti	Video Story with Menti 2	Video Story with Menti 4
Introduction to COP26	Make-a-thon in teams	Make-a-thon (finalising products and choosing best products from each team)
Themes activity		
Lunch	Lunch	Lunch
Country Comparisons activity	Make-a-thon in teams	Judging of Make-a-thon
Video Story with Menti 1	Video Story with Menti 3	Video Story with Menti 5
Reflection / discussion	Reflection / discussion	Personal pledges* and close

* Each participant is asked to make a personal pledge, such as talking to their family about what they've learned or doing something in their local community.

Understanding the 1.5Max Schools Summit better

Game purpose

The overall purpose of these activities is to provide a flexible and meaningful way to engage with COP26. The various activities fit into Steps 1-4 of the ACT change model: aims, outcomes, actions and enactment, in different ways.

Desired change

The primary desired change is "to enable as many people as possible to engage with COP26 even though we are still concentrating on recovering from the lockdown" 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

Instructional design focussed primarily on making pupils and teachers feel motivated and empowered to engage with and critique the COP26 and the issues connected to it. The form taken is a 3-day international "schools summit" combining various activities which are also usable individually by single schools.

Intended Learning Outcomes

- Pupils can engage in interesting and creative ways with data relating to COP26
- Pupils can produce creative, thought-provoking and eye-catching products as a result of their research
- Staff and pupils have an increased sense of engagement with COP26

Desired Learning Behaviour

- **For teachers:** to feel motivated to do something with their pupils to engage them meaningfully with COP26
- **For pupils:** to engage meaningfully with COP26 and climate change more generally in their own families and communities
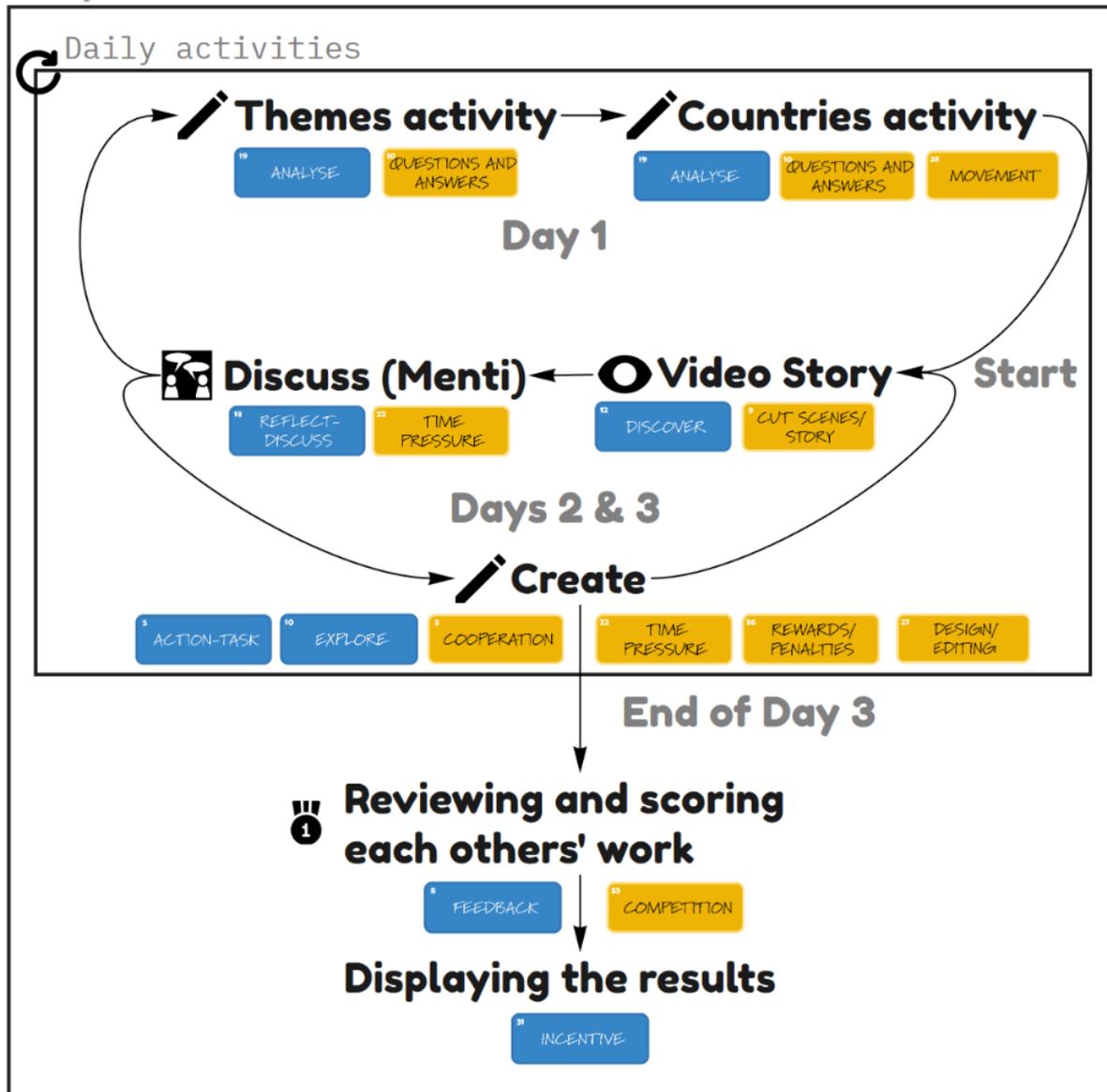
Specific learning mechanics are captured in the gameplay loop diagram below.

Gameplay loop

The below diagram shows the gameplay loop for this activity (including reference to relevant out-of-game activities). 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.

3-day summit

Daily activities

Themes activity → **Countries activity**

ANALYSE | QUESTIONS AND ANSWERS | ANALYSE | QUESTIONS AND ANSWERS | MOVEMENT

Day 1

Discuss (Menti) ← **Video Story** ← Start

REFLECT-DISCUSS | TIME PRESSURE | DISCOVER | CUT SCENES/STORY

Days 2 & 3

Create

ACTION-TASK | EXPLORE | COOPERATION | TIME PRESSURE | REWARDS/PENALTIES | DESIGN/EDITING

End of Day 3

Reviewing and scoring each others' work

FEEDBACK | COMPETITION

Displaying the results

INCENTIVE

The core loop underpinning the design of the summit is:

See a Video Story → **Discuss** responses → **Create** or **analyse** something

In this way the instructional design allows for new learning as well as for processing and integrating it with personal feelings and opinions and creating something new based on the results. This repeats over 3 days so that by the third day, the products the pupils are making can integrate learning from all three days. This aims to create a feeling of engagement and empowerment. As well, the process produces results which can be shared beyond the classroom.

Credits

This game was co-designed and developed by Tom Bird, Callum MacLellan (of sustainabilitypartnerhips.org.uk), Joanne Craven and Daisy Abbott 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/.

Clean energy

COP26 theme

Clean transport

COP26 theme

Nature-based solutions

COP26 theme

Adaptation and resilience

COP26 theme

Finance

COP26 theme

Clean energy

Clean transport

Nature-based solutions

Adaptation and resilience

Finance

Biodiversity

Migration

Sustainable farming

Flood protection

Climate justice

Poster	Video
Song	Model
Blog post	Public art
Dance	Game
Poster	Video
Song	Model
Blog post	Public art
Dance	Game