





# Practitioners Guide

## Background

Pop Up Play (PUP) is a system that enables you to use immersive digital technology to create learning opportunities for children and young people.

PUP has been developed, tested and designed for use in schools, arts venues, libraries and museums. Part theatre, part film, part game, part playground - the PUP system takes images and projects them onto a screen. These images might relate to children's books, gallery or museum exhibitions, theatre productions and national curriculum topics. Video cameras with motion tracking then place participants into a projected worlds for exploration and open-ended learning.

Through carefully managed workshop activities, participants become invested into an imaginary dimension and realise the possibilities of digital play. Workshop design and pedagogy is supported by Digital Creative Play Research: a supportive framework for practice, assessment and management of participant activity and flow of creative play that draws upon research into digital pedagogy, gaming immersion and mixed reality play.

(for further reading please refer to the Research section of our website)

For those of us who have ever peered into a wardrobe and wondered what magical world might be waiting on the other side, PUP can provide the opportunity to step right into our own imagination, to meet the mighty lion and have words with that witch.

Once in place, the PUP system is accessible to use for even the most technophobic facilitator and has been tried and tested by a broad range of workshop providers. After a short time experimenting with PUP, each facilitator was able to identify how they would use the system in their setting to enhance learning within a range of subjects. Drama, visual arts, dance, creative writing, even curricular subjects that may not traditionally access the arts such as maths, history, geography and science. PUP promotes the use of individually preferred and varied multiple intelligences, via the different roles and opportunities. Peer to peer learning also develops fast and by 20 minutes into the session, participants have usually harnessed the iPad controls and explored the main elements of PUP, demonstrating what they have discovered.

## Pop Up Play in Action

PUP is best used with **small groups of around 6 to 10 children or young people, aged between 6 and 11 years old**. Our guide focuses on activity for this target age range, however, you may gather ideas where PUP might benefit learning through creative play for other age groups and try them out - the sky's the limit!

A selection of PUP play cards have been carefully designed to introduce participants to the system and launch active play within PUP. These can be a call to action and used as a catalyst for;

- **Instant action**
- **Discussion** to enable action
- **Pause play** to create new media/characters/worlds/narrative
- **Reflection** of the sessions
- **Ideas generation** for future play

The four card categories are – **CHANGE | CHALLENGE | CREATE | CONNECT**

## The Flow Play

The role assumed when working with PUP is that of '**Game Maker**'. All participants are Game Makers - active in shaping the environmental worlds and inventing the game play, the action/activity. The Game Maker might be active or creative; offering instructions or carefully watching and planning. Using the **CHANGE** cards you can invite Game Makers to explore the system and the technological possibilities. 'What happens if... I change the background; change the scale, the lights, the sound'. These changes provide instant action and open up a world of possibilities.

Suggested play – **CHANGE** cards can be used throughout a session to encourage changes of roles, for example, you can hand a change card to a participant who might be less confident to dive into active play, it may encourage them to have a go. Change cards can also be played with a 3 minute timer inviting Game Makers to choose a card each time the buzzer goes, and activate that change. This can provide instant action.

## New Departures

As with gaming technology it is important when using PUP to think about goals, rules, levels of participation and feedback. Using the **CHALLENGE** cards can support the participants to work towards specific outcomes, place limitations or adopt new rules into their play.

How will the play advance if I challenge the Game Makers to invent a problem, a new character or new rules? How about if they are challenged to repeat physical actions and journeys in reverse, slower or faster?

Suggested play - The **CHALLENGE** cards can support the development of a narrative through **action**, you can introduce ideas around jeopardy: offer a challenge card if a game is in danger of becoming stale. This can promote **discussion** to enable **action**.

## Creations

Following instant action produced by the **CHANGE** cards, and discussion enabling action via the **CHALLENGE** cards, the Game Makers should be ready to explore fresh ideas and create new environments. They may want to use the webcam to create their own small worlds for projection. They may want to change their appearance by creating a puppet or a cutout. The **CREATE** cards invite ways to develop the play through 2 and 3D modelling. Again this can be instant, a quickly drawn maze, or an image found in a book **CREATE** cards can also provide opportunities to devise a story board or a game plan.

Suggested play - The Game Makers can be the Constructor the Puppeteer, Illustrator or Architect. *Create* shifts engagement to involve other realities and can provide extraordinary opportunities for the participants to step inside their own worlds; see themselves projected into their own drawings. We can **Pause Play** to create new media/characters/worlds/narrative, which can aid deeper immersion within creative play.

## Connections

PUP supports the development of communication skills. Through play, Game Makers develop the awareness they need to work collaboratively to navigate the game-play. The relationships with other Game Makers and technology require them to work together to make choices and have their perceptions challenged through new narrative or another player's interaction. They need to understand and rationalise.

Suggested play - Using the **CONNECT** cards you can endorse and support communication during the session through reflection at various junctures. They can also form part of 'circle time' to close the session. Connect cards ask Game Makers to use other words, actions, ideas to make links between one activity and another to produce new ideas to cross compare or rationalise. These cards can promote **Reflection** on what has passed and **Ideas Generation** for the future (next session); this type of group ownership over activity can aid engagement and attainment.

## Super Powers

The Super Power card can be used anytime as a way to inject the adventure back into play, as and when it may be in danger of becoming stale or ideas are running out of steam. A Super Power card could be used as an invitation into more active play for those who may have been the Observers for a long time. Alternatively, they might be used early on in play, after the group have explored the system via the Change cards. They can introduce the use of the webcam and the concept of creating and up-loading our own characters, Cut outs and backdrops, leading to the development of narrative and storytelling. Essentially, the Super Power card is a wild card, and has no associated rules or specific call to action: the receiver of the card can use it in any way that they like.

## Roles within PUP

### PUP Facilitator

The facilitator introduces the technology, offers guidance and introduces ideas and rules when necessary. The facilitator can provide alternative stimulus including props and materials, or instructs a shift in the dynamics and/or the setting. It is the facilitator that mediates play between the participants as Game Makers. Use the Cards to get started.

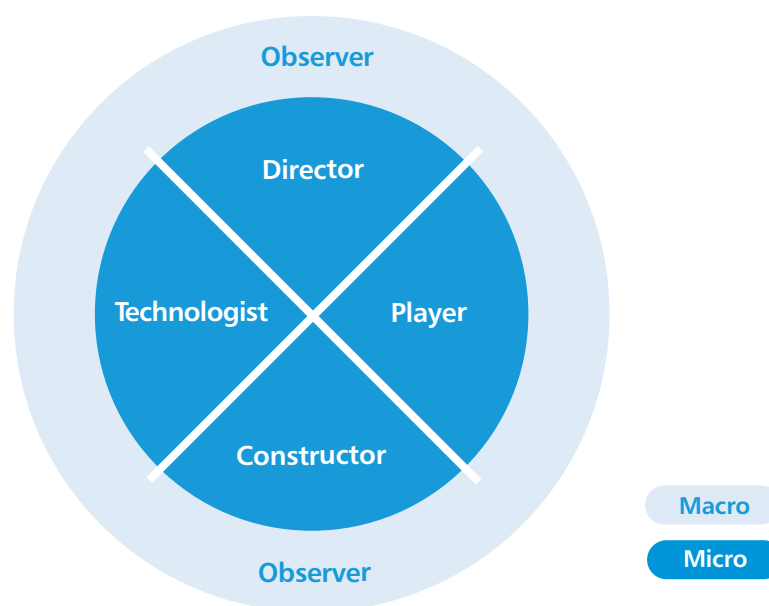
**Technologists:** The players in charge of the technology, the iPad and or webcam. They choose what we see and how we see it in the screen. They learn by exploring. They pass expertise on through peer to peer learning and shoulder watching, they 1) imitate, then 2) master obstacles, then 3) create freely.

**Constructors:** These are our game designers. They create 4D worlds, using 3D toys and 2D drawings. They operate as a team, some with pens others with cameras. They offer suggestions and solutions to some of the problems. Together they develop deeper ideas through collaborative endeavours.

**Players:** Actively play within the screen either as themselves, a character or a digital puppet.. They need rules and feedback from the facilitator, directors or constructors. The Player is 'inside' the game that has been set up by everyone.

**Directors:** Offer instruction, suggest ideas, and invent new rules that place demands on the player, technologist and constructor.

**Observers:** They are active and necessary within the game play. Do not underestimate the role of the observer. As they watch they think, they allow new ideas to manifest which becomes a vital source of refreshment for our facilitator. The observer may be quiet or they may plot with neighbours (they should be encouraged to chatter) then they start to become distant directors ready for active participation and play.



*Diagram of the Roles within PUP and their Micro/Macro engagement*

## The Technology

The PUP system is comprised of **three parts** - **video system**, **audio system** and **lighting system**. Each of these systems have a bank of selectable settings and media that can be linked together to provide one button scene changes. Accessible iPad controls enable the person using the technology to be mobile whilst running the session.

**The visual system** uses of a 3D sensor, namely a Kinect camera, which can bring the participants into the screen, whilst cutting out the background. From here elements of the digital and real world can be mixed together. It is also possible to track items onto a user's body or do full body digital puppetry. The video system can also use a USB camera or visualiser as an input, enabling you to bring real world items into the digital environment.

**The audio system** gives a bank of ambient background sounds and two further banks of sound effects that can be used, as well as microphone input. As with all parts of the system, all that is required to change or add to media is to simply add or remove things from a folder structure on the laptop. The system will simply pick up new files when re-started. For example, users of the system could create their own body parts for a digital puppet and just copy them into a folder.

**The lighting system** is not essential to the basic set up but can aid deeper immersion in the system. Lighting is designed to work with 4x6 channel RGB DMX fittings, though by setting up the DMX devices with the same addresses you could have any number with four individual output colours. The lighting system is very simple to use; using a single finger a user can scroll through all the colours of the rainbow effortlessly.





## How to use the cards

These cards evolved from workshops to facilitate the flow of digital creative play.

They can be used to change play, promote challenges, to produce new ideas, inspire and create new worlds, invite us to connect.

They are not final, as new ideas will present themselves, and others will become self evident...

## Download

Are you ready to play?

FREE download available from [www.sparkfestival.co.uk/popupplay](http://www.sparkfestival.co.uk/popupplay)

where you will find everything you need to help you pop up and play

## Roles

**Technologists** - taking control of the technology, the iPad, the web cam

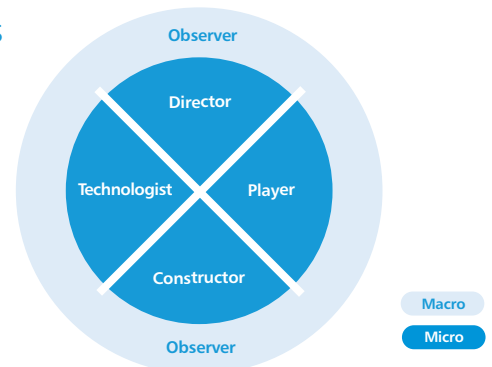
**Constructors** - game designers creating 4D worlds, with 3d toys, 2d drawings and their ideas.

**Players** - actively inhabiting the worlds in the screen, in the music and in the role

**Directors** - innovating the flow of play in and out of worlds

**Observers** - watching and thinking, cultivating new ideas

## Roles



## Share your ideas

We hope you have a great time using Pop Up Play and we would love to hear how you've used it.

Join the discussion groups in the Pop Up Play community to tell us all about your experiences

[www.sparkfestival.co.uk/popupplay](http://www.sparkfestival.co.uk/popupplay)

tweet using #SparkPUP



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**change**

Roles



**change**

Sounds



**change**

Lighting



**change**

Media Backdrop



**change**

Cutouts



**change**

Scale



**change**

Location





**connect**

Make new links



**connect**

Explore possibilities



**connect**

Use other ideas



**connect**

Use other words



**connect**

Use other actions



**connect**

Compare



**connect**

Rationalise



**challenge**

Invent a problem



**challenge**

Add a rule



**challenge**

Become a puppet



**challenge**

Invent a character



**challenge**

Change the game



**challenge**

Make it  
easier / difficult



**create**

Riddles



**create**

A storyboard



**create**

A game map



**create**

A puppet



**create**

New backgrounds



**create**

Performance



**create**

Alphas



**create**

Small world models  
in teams



**create**

Sounds



**super power**

