Designing games to facilitate learning

How to design cheap and effective traditional games

Introductions

- Nicola Whitton

- Now... find yourself a group!
  (1 Heart, 1 Diamond, 1 Club, 1 Spade)

- Share with your group...
  - What's your name?
  - Where are you from?
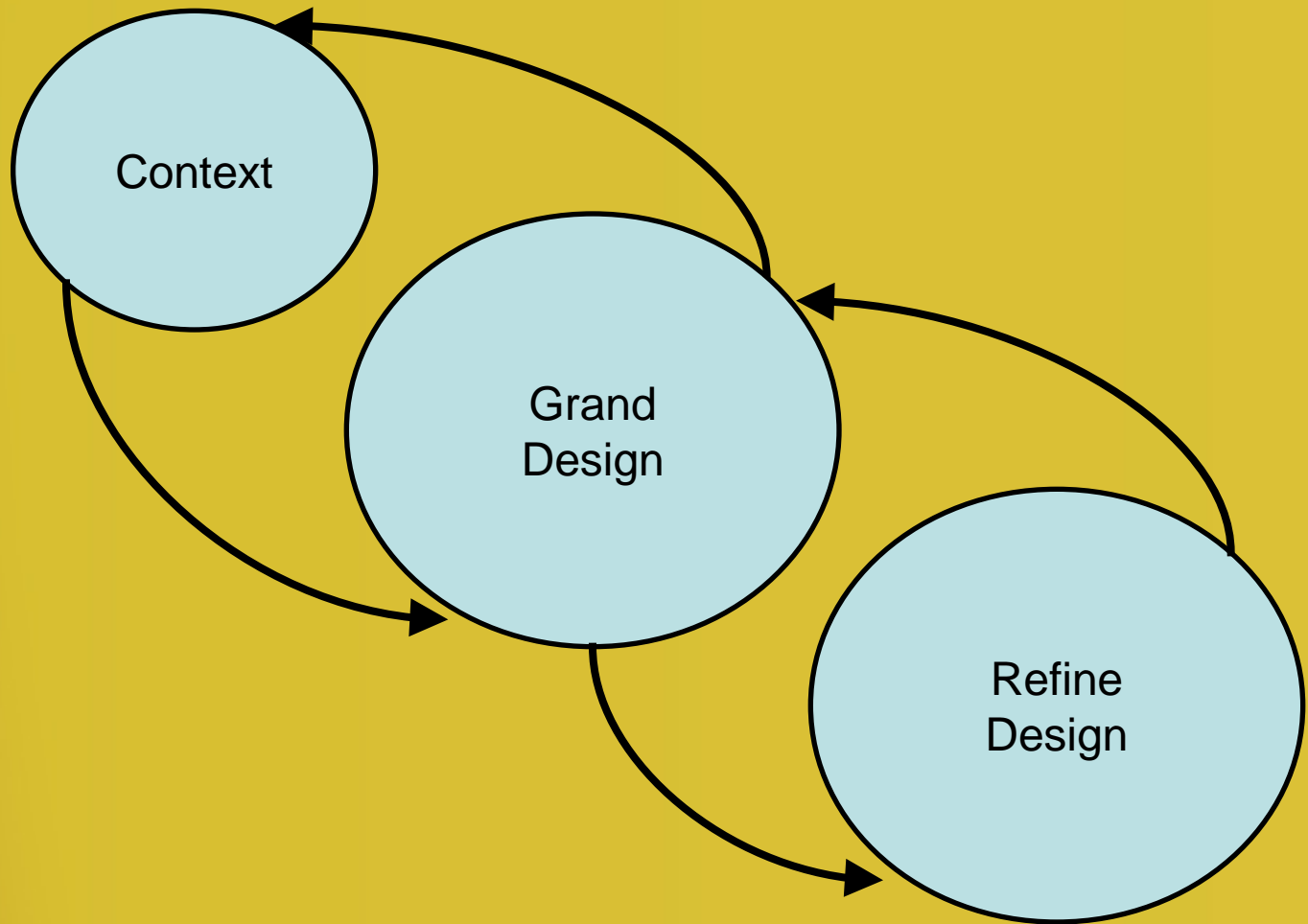 - What's your favourite game?

Aims of the session

During this session, we will:

- show that cheap and simple games can be effective;

- introduce a simple model that can be used to guide game design;

- help you work through the process to generate and share your own ideas;

- have some fun!

Ten-step model of game design

Stage 1: Context

- Step 1: Learning objectives
- Step 2: Constraints
  - Time
  - Money
  - Skills
  - Student characteristics
  - Student numbers
  - Technology
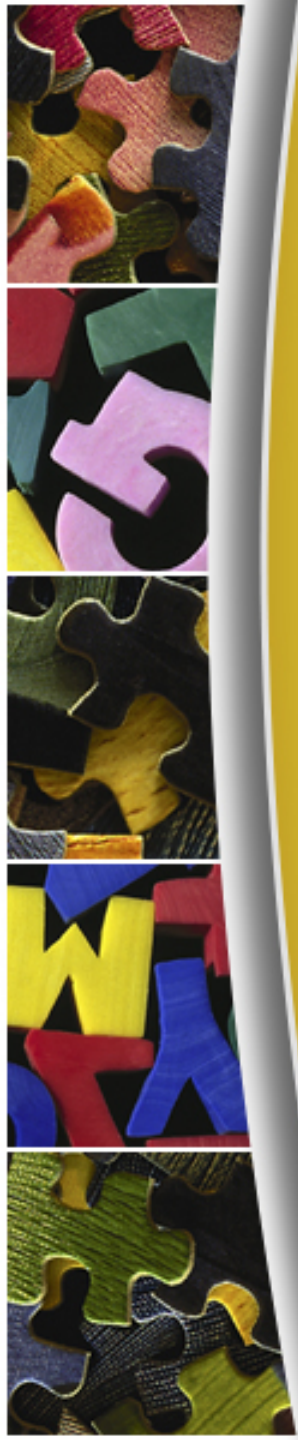 - Accessibility
  - Subject

Stage 1: Activity

- Select your 'nationality'

- Learning objectives
  - **Spades** select a context
  - Agree on up to three objectives

- Define constraints
  - Who is the game for?
  - How long have you got to play it?
  - How much money do you have?
  - What expertise do you have as a team?
  - **Hearts** select extra constraint

Stage 2: Grand design

- Step 3: Type of game
  - Board, card, quiz, physical, puzzle, web-based, role play, mobile app, console game, computer…
- Step 4: Core mechanics
  - Goal, rules, scoring, progression, rewards, win states
- Step 5: Game balance
  - Playing time, difficulty, level of chance, collaboration and competition, seriousness, physical vs. mental
- Step 6: First prototype
  - Playing space, artefacts

Stage 2: Activity

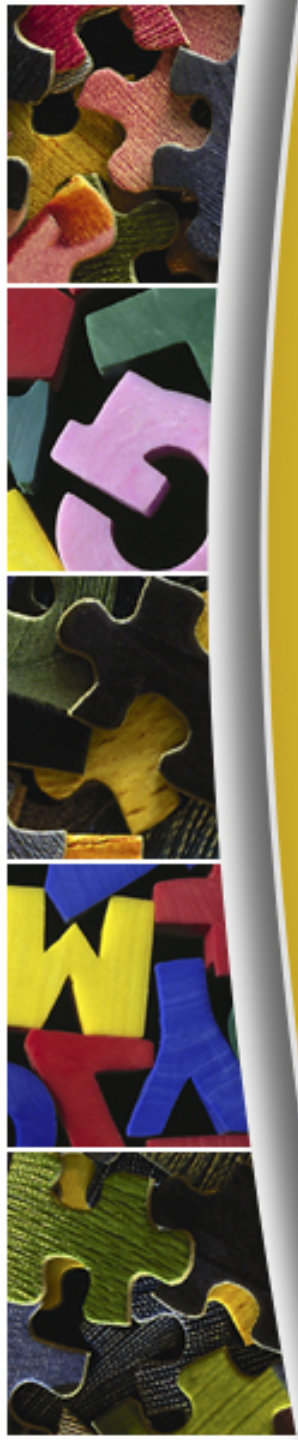- Develop your first prototype

Stage 2: Playtesting

- In game design it is important to carry out play tests / market research, and to test out your core ideas at an early stage

- **Diamonds** – an extra challenge.

Stage 3: Refine design

- Step 7: Add story
  - What is the game context, who are the players?
- Step 8: Add sub-mechanics
  - Conflict, collection, chance, sabotage, tension, speed, risk, rewards
- Step 9: Check learning
  - Review against learning outcomes
- Step 10: Create final game

Stage 3: Activity

- Refine your game!

- **Clubs** – select a story layer
- Apply new story/narrative to your game

Step 11: Play your game!