**One Card Game for Design Thinking**

**Materials**

One printed card (two-sided)

**N.B. If you like – to help your ‘design team’, if they find drawing and layout challenging, you can use your own ‘colour.png’ side of the card – maybe using a square grid or other guide lines.**

One die

Pencil and rubber (for making non-permanent marks)

Marker pens (red, green and blue)

Lengths of yarn (approx. 1.5 m) in red, green and blue

Cocktail stick or similar for making holes in card – and for poking yarn through holes

Scissors

Beads (with big enough holes to be threaded) 6 each of red, green and blue

Sellotape (for reattaching bits of card, if necessary, for subsequent prototyping)

Box in which all materials above **except** the card and die should be kept until the first prototyping stage.

Pen and paper for both end users and design team to make notes.

Counters to keep score (can use pen and paper)

**Setup**

The players are split into two groups

* One or more ‘End Users’ (Initially it would probably be better if the teacher /facilitator took this role)
* Everyone else who is the ‘Design Team’

**Important: Only the End User(s) should see the reverse of the card (the side with the table on).**

The End User decides on their ‘requirements’ by either choosing one option from each row in the table on the reverse of the card, or by throwing the die to randomise their choice from each row. They should make a note of the requirements, so they can refer to them later. They then hand the card back to the Design Team (grid side up) and the game can begin.

**Instructions to Design Team (both Design Team and End Users may hear this)**

1. You may only look at the grid side of the card during the game.
2. You will use the card and some other materials (currently unrevealed in the box) to create prototypes and a final product for the end user.
3. The game consists of ‘Fact Finding’, ‘Ideation’ ‘Prototyping’ and ‘User Feedback’ stages, which you can go through as many times as you like, in any order, before presenting your final product. (Or your teacher / facilitator might specify a given number of iterations)

**Fact finding** – You should ask the end user(s) questions to discover what they want from the product. The first time you do this you can ask Five (5) questions. Each subsequent time you may ask one fewer question than the time before. If you wish to ask more, you may, but each extra question will cost you one token (which you gain during User Feedback). Be sure to make careful notes to capture user requirements accurately.

**Ideation** – Using the notes you made during fact finding, spend some time brainstorming ideas for what the product should look like/consist of. The first time you do this you will have limited information about the materials that are available to you, so you should think about what it might be possible to do with a piece of card, and what the other materials might be, given what the End User has shared with you.

**Prototyping** – Using the grid side of the card, and the materials in the box, create a prototype product to be shared with the end user for their feedback. You might want to return to Ideation, once you open the box for the first time, because then you have more information about what might be possible.

**HINT: You only have one card, so be careful about making design decisions that might be difficult to go back on (making permanent marks or changes to the card). Think how you might represent those without making irrevocable changes.**

**User Feedback** – When you share your prototype with the end user, they will give you a combination of verbal feedback and scores for aspects of your design. You will receive 10 points from the End User if your design meets their requirements perfectly.

**Scoring** – the counters you have at the end of the game will be divided by the number of ‘User Feedback’ rounds you went through to give your final score for the game.

**Instructions to End User (The Design Team should NOT hear /read this)**

1. Only share information with the Design Team if they ask a relevant question – e.g. do not volunteer the information about wanting Red in the design unless they specifically ask about colour.
2. The design team do not know that there are five categories of requirements, nor what those categories are. It will be better if you **DO NOT** reveal this fact to them in your feedback. Simply feedback verbally on aspects on the design (“I don’t like these blue beads, so please don’t include them”, and give them points (or not), based on the criteria of your requirements.
3. For each of the categories, there is a maximum of 2 points available, because there is the possibility of being ‘right’, ‘wrong’, or ‘partially right’ in most categories. (Don’t express your feedback like this, it is quite artificial and not how a real end user would respond)

Example: The team have included blue beads threaded on red yarn in the design and they have made the shape of a square by threading the yarn through holes in the card. They have included the whole of the original card in their design.

Your requirements are:

Colour = Red

Material = yarn and pen

Structure = whole

Additions = beads

Shape = 2 different shapes

So, the colour is ‘partially right’, gaining 1 point, because blue should not be included. They are also ’partially right’ on materials because yarn should be included, but so should pen – another 1 point. They have one ‘whole’ piece of card in their design – 2 points

**Note: The term ‘whole’ refers to including a single piece of card in their design. This could be only a part of the original card – a piece cut from it, but as long as a single piece is all that is included, it counts as ‘whole’. ‘Split’ refers to more than one piece of card being included.**

Beads are correct – and it doesn’t matter whether they are threaded or not (as your requirements simply says ‘beads’). The team have already lost a point for these being the wrong colour – 2 pts

Square is only partially correct because there should be two different shapes – 1 pt

So, you would give them a total of 7 points, and appropriate feedback (without giving too much away – because you want them to go into another ‘fact finding’ and to think carefully about what they should ask)

**Note: With regard to shapes, those can be achieved in a number of ways. They can be drawn with pen, threaded with yarn, but also cut out of the card, or expressed in the arrangement of beads, for example. So, if the ‘whole’ piece of card in the above prototype had been cut into a diamond, triangle or star – the design team would have received 8 points.**