

## 7.0 Module 7

# Fundamentals of Toy and Game Design:

18 hours (12 in school and 6 at home)

Design  
Skills



Design  
Sensitivity



### Exposure 1

### Exposure 2

### Exposure 3

- Introduction to Indian Toys
- Introduction to Indian Games
- Introduction to digital gaming

### Overall Task

### Design of a Toy and a Game

### Task 7.1 (at School + Home)

- Deconstructing a Game

### Task 7.2 (at School + Home)

- Design of a Innovative Game

### Task 3.3 (at School + Home)

- Design of an Innovative Toy

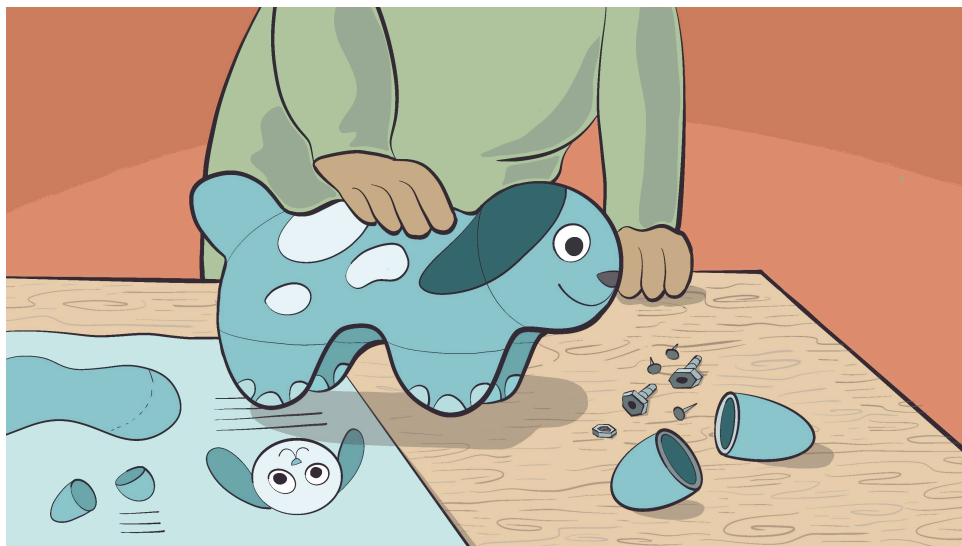
### Final Output

- Make a presentation of the designed Game and Toy

## 7.0 Module 7

# Fundamentals of Game and Toy Design

(12 hours at school + 8 hours at home)



### Introduction:

Play is an integral part of every childhood. It is essential for child's development and for learning life skills. Play is how children learn to have fun, to socialize, to think, to solve problems and to work. Play connects children with their imagination, their environment, and the people around them.

Toys and Games are tools children use in play. It impacts the learning and development of children. Toys and Games value enhance a child's natural ability to engage in imaginative and meaningful play. Toys and Games vary across countries, cultures, and families.

### Aim of the Module:

The aim is to develop a fun and creative approach for students to understand toy and game design and work in the growing needs and aspirations in the field of education and entertainment. The students will fuel their innovation towards creative conceptualisation, character design, materials, narrative building, strategy development and lastly the play and reward cycle.

### Place:

**Place:** Task 7.1, Task 7.2 and Task 7.3 are done at School and Home



### Grouping:

This exercise is done in groups of 3 to 4 students.



**Equipment:** Sketchbooks for sketching and taking notes, A3 Size papers, Chart papers, Color Pencils and Color Pens, cardboard, coloured sheets, markers, waste materials and Computers/Laptop for representations/presentations.

**Exposures:**

**Exposure 1:** Introduction to Indian Toys

**Exposure 2:** Introduction to Indian Games

**Exposure 3:** Introduction to digital gaming

**Design Thinking & Innovation Process involvement:**

This task involves the following phases of the DT&I Process:

Phase 1. Observe/Empathise/Research (observation user interactions)

Phase 2. Understand/Analyse/Define (analysing user requirements + organizing information for toy/game design)

Phase 3. Ideate/Alternate/Create (trying creative alternatives)

Phase 4. Build/Prototype/Detail (making the output and the presentation)

Phase 5. Evaluate/Reflect/Implement (feedback from others)

**Mapping SDG Goals:** The following SDG goals need to be considered while solving this task. While documenting elements and expressions, do think of gender equality and reduced inequalities and concern for life on our planet.



# Task 7

**Task 7 = 7.1 + 7.2 + 7.3**

School Hours: 12, Home hours: 6



## Task 7.1



**Task 7.1:**

Home hours: 2, done individually

**Task Title:**

## Deconstructing a Game

**Task Objective**

- Understand game components and structure

In this task, the chosen game is analysed to understand its structure and components

**Suggested Process:**

1. Choose any one game you play (could be physical or digital)
2. Write why you enjoy the game?
3. What are the characters/your role in the game?
4. What are the constraints in the game?
5. What are the success and rewards?
6. What and when are choices provided in the game?
7. Mention one or two strategies used in the game
8. How does the game end?

**Output 7.1:** Make a 8 -10 slides presentation with text and images on deconstructing the game

## Task 7.2



**Task 7.2:**

School Hours: 6, done in groups of 3-4 and Home hours: 2, done individually

**Topic title:**

## Design of a Card/Board Game based on Play and Learn Activities concerning a social / environmental issue

**Task Objective**

- Understand user
- Understand Empathy
- Simplifying concepts
- Making learning fun
- Design of Characters/ Elements in the Game
- Apply game analogy

**Play and Learn:**

- Play means that the game could be playful, challenging, engaging
- Learn means that one should understand a concept while playing the game

**Task: Design a Card or a board game based on a social or environmental issue**

(could be gender equality, drug abuse, cleanliness, health and wellbeing, care for elderly, pollution, alternate energy, etc.)

The game topic should include learning in addition to having fun

**Suggested Process:**

1. Make a mindmap of the components of the chosen social /environmental issue
2. Brainstorm for ideas on possibilities to make a game on the subject
3. Design the basic plot/ narrative of the game, the strategy for the game, then the game plan (how it is going to be played), procedure to move forward in the game, elements/characters in the game, design the setting or the environment.
4. Design the levels, rules, rewards, choices, etc.
5. Make a mock-up (a rough prototype) using cardboard/thick paper, cutting it to size and sketching on it
6. Get another group from your class to play the game and give you feedback
7. Improve the game based on the feedback
8. Do the final design prototype (possibly using a computer). You might need to design a brochure to explain the game

**Final Output 7.2:** Demonstrate the game to the whole class using your prototype

**Task 7.3****Task 7.3:**

School Hours: 6, done in groups of 3-4 and Home hours: 2, done individually

Task Title:

## Design an 'Innovative Mobile Toy to Experience & Learn any Concept'

**Task objectives:**

- Translate concepts to tangible materials
- Bring fun in creativity
- Understanding material and basic mechanics
- Model making

The concept could be from any field/subject

- Innovative means that the toy has something new in its design
- Mobile toys are those that can move or make a movement – Wheeled toys, spinning toys, Climbing down toys, swinging toys and such
- experience means that the toy could be playful/joyful/enjoyable
- learn means that one should be able to understand a concept while playing with the toy

Clue:

- You could come up with a new design for a toy with a surprise built into it.  
There is a surprise when you use or move the toy  
(for example: it can make a funny movement, make a noise, does something unusual)

**Suggested Design Process:**

1. You could follow the design thinking process to solve this problem: observe, understand, ideate, build/do and test
2. Identify the concept to research (you do a mind-map of possible concepts)
3. Understand how the concept is applied physically
4. Convert the principle to get a playful response (you could do brainstorming for ideas)
5. Make several sketches of your ideas
6. Select from these ideas and see if you can combine or modify them to make it better
7. Make a mockup for the toy (you could make use of recyclable materials)
8. Make a final model with the finished components/parts

**Output 7.3:** demonstrate the final model to the classmates

Students are encouraged to use simple readily available materials like bamboo, crushed newspapers, ice-cream sticks, rubber bands, jute, coir, and recycled materials.

A cost constraint could be given to limit students from spending extravagantly.

**References:**

Indian Games:

<https://www.dsource.in/resource/indian-games>

Indian Toys:

<https://www.dsource.in/resource/indian-toys>

## Reflection:



### Questions to ponder:

- What are the most interesting phases of the Game / Toy Design process that you liked?
- Was the task of designing a Game and Toy challenging and engaging?
- Can you design interesting Games and Toys concerning other issues?
- Would you like to become a Toy designer/ Game designer?

## Self Assessment:

### Task 7.1

#### De-constucting a Game

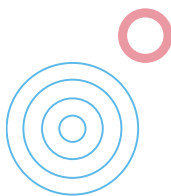
(Individual Task)

### Assessment Criteria (Task 7.1) – Assess yourself:

#### Game Analysis (depicted through presentation):

- Whether the students explored enough in terms of analysing the game.

☐ *Beginning* ☐ *Developing* ☐ *Promising* ☐ *Proficient* ☐ *Excellent*



#### Involvement/Participation:

- The students actively participated in the discussion/task and tried different exploration

☐ *Beginning* ☐ *Promising* ☐ *Excellent*

## Self Assessment:

### Task 7.2

#### Design of Play and Learn Games

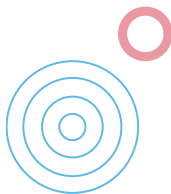
(Group + Individual Task)

### Assessment Criteria (Task 7.2) – Assess yourself:

#### Learning' objective:

- The extent to which the game leads to meeting the 'learning' objective of the class

☐ *Beginning* ☐ *Developing* ☐ *Promising* ☐ *Proficient* ☐ *Excellent*



#### Game design and presentation (prototype):

- The extent to which a student integrated different elements of game (*like characters, constraints, rewards, choices*)

☐ *Beginning* ☐ *Promising* ☐ *Excellent*

## Self Assessment:

### Task 7.3

#### User Research and Interface Design

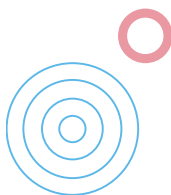
(Group + Individual Task)

### Assessment Criteria (Task 7.3) – Assess yourself:

#### Application:

- The extent to which the student was able to apply the chosen concept to the toy design

☐ *Beginning* ☐ *Developing* ☐ *Promising* ☐ *Proficient* ☐ *Excellent*



#### Prototype Model making

- The extent to which the idea of toy is depicted through a working model

☐ *Beginning* ☐ *Promising* ☐ *Excellent*