Children's Own Little Games and Fun

Fun ideas are the design ideas, which provide playful, lively and interactive settings to the children to centre their games on. These ideas constructively engage a child in an activity, which is playful and meaningful without being overwhelming. Some of these ideas are based on certain scientific principles. The idea is not to teach the child the scientific concept but to let them experience it. The basic premise of providing these fun ideas is that it may stimulate the child's natural sense of wonder and curiosity as to how a particular phenomenon occurs. It is assumed, that once faced with such a query, the child may try to find a solution, by either reading about it, discussing or speculating about it. The expectation is that once the seed of natural enquiry is sown, it will germinate sooner or later. The sheer joy of stimulating to discoveries or connections may propel children into an endless voyage of exploration and learning.

Children need to belong to a school. They need to feel a sense of ownership...that the school is theirs. What better way can there be, than to provide space for familiar games, like hopscotch (stapu) or board games that they love playing! Games that can be changed and moulded to suit different needs, or moods! Games that provide endless hours of fun and engagement, in spaces that they naturally prefer!

28 Board Games

29 Flat Dice

30 Goltara

31 Mystery Wall

32 Periscope on Wall
28 Board Games

Introduction

Games involve thinking and planning. It keeps children alert and excited as they develop better skills and ability to think ahead to the next move. Classes I to VIII must play games. Here only few examples are shown.

Objectives

1. To learn to follow rules.
2. To make their own rules and make a game more challenging.
3. To learn to discuss and share ideas and opinions.
4. To feel free and in control of one's own life. All children need to be free and enjoy the feeling of 'swatantra' within the bounds of responsibility.
5. To understand that others may see situations differently and to discuss this in a socially acceptable manner.
6. To understand that learning is fun.

Teaching-Learning Activities

Activity 1: The Square Game – Level I

Classes I, II, III, IV

How to play

1. Each player will find three stones or buttons. One player can have dark stones while the other can have light coloured stones. Black and red coloured buttons can also be used.
2. This game is similar to X's and O's.
3. The objective is to get three stones in a row.
4. The person who starts first, places one stone on the board. The other player then has a turn and places her stone on the board. The first player then places her second stone on the board and starts to make a line. The second player places her second stone on the board and stops the line. The first player then places her stone and tries to make another line. The second player also stops this line or tries to make her own line.
Teacher’s Role

The teacher needs to play the games with the children for a few weeks. Some children learn very quickly. They can be asked to teach other children. The games here are only a sample of the many games that are played in India. The teacher needs to approve of these games and explain their value to the parents. Please do not say, “You only like to play.” Play is the way that children learn to understand the world. You also need to encourage chess, carrom, marbles, hopscotch, ‘satolia’ and other games of skill in the school.

Happy children become happy adults.

Suggested Activities

1. The Square Game – Level I
2. The Square Game – Level II
3. Game of Five Pointed Star
4. Indigenous Board Games

Some Board Games are in Activity 4. You can have them made on the floor in the veranda or on benches / platforms under the trees. You can also draw them on hard cardboard from an old file. You can also find the games that are played in your area and make them in school.

Activity 2: The Square Game - Level II

Classes II, III, IV, V, VI, VII, VIII

This game board does not have the diagonals that the Level I game has. Therefore it is more difficult.

How to play:
1. Play this game in the same way that you play Level I game.
2. You must follow the lines.
3. The first player who gets three in a row wins the game.
Activity 3: Game of 5 Pointed Stars

Classes II, III, IV, V, VI, VII, VIII

This game is played alone with nine buttons. The board may be your workshop materials.

How to Play?

a) Place nine buttons on the circles on the star.
b) One place will remain empty.
c) Now jump over any button into the empty space. Remove the button that you jumped over. Keep doing this.
d) Try and end the game with just one button on the board.
e) This game is excellent for analytical skills and concentration.

Activity 4: Indigenous Board Games

Classes IV, V, VI, VII, VIII

Formats for playing different games are given below. These can be first engraved on a floor and subsequently painted on horizontal surfaces such as floors, platforms, benches and other raised levels, which children are likely to use for sitting casually, in different seasons. Some examples of indigenous games are given here:

a) Nau-Kati (Nine-pieces game)
   Played by two players.
   Each player has nine pieces that are placed at the junctions.
   Players have to make moves and trap the opponent's piece.

b) Chauk Du (Changa po)
   Played by two to four players
   Each player has four pieces.
   Players move pieces based on the dice numbers till they reach the destination.

c) Pachisi
   Played by two, three or four players.
   Each player has four pieces.
   Players move pieces based on the dice numbers till they reach the destination.

d) Sher Aur Bakri
   Played by two players
   One player has the tigers and the other has the goats, all placed on junctions.
   Players with tigers try to capture the goats while the ones with goats prevent capture.
e) **Solah Kati** (Sixteen-pieces game)
   Played by two players.
   Each player has sixteen pieces that are placed at the junctions.
   Players have to make moves and trap the opponent’s piece.

*Space for Notes*
29 Flat Dice

Introduction

Flat dice helps children to play indigenous games as well as independent play of dice, with actually buying it. Children need to play many Board Games with dice. It helps them to learn to add, subtract, multiply and divide. Children do not always have dice with them. The dice found in the market are usually very small and difficult to read.

Objectives

1. To learn addition, subtraction, multiplication and division.
2. To use as an aid to study fractions.
3. To use as an aid to understand the properties of 'Zero'.
4. Play with a partner and share the excitement.
5. To allow children to make their own games and variations of the same game.

For example, children will need to decide what happens if the flat stone rolls off the flat dice. Will the child lose a turn? Will she get two free turns and then lose a turn, if it happens a third time?

Children will also need to decide the size of the flat dice that they draw on the ground. Also they need to decide how far away each child must stand from the flat dice.

This type of negotiation is an important life skill and prepares one for life in a democratic society. If cheating happens, children must learn to give feedback to the child who cheats. That child needs to know that other children will not play with him, if he cheats.

Teaching-Learning Activities

Activity 1: Dice Game

All Classes

How to Play?

a) Fill in the flat dice with numbers 1 to 6 (or 1 to 9, if the dice has 9 spaces).
b) Each player need a flat stone to throw on the flat dice.
c) Keep a pile of dried seeds or a pile of stones beside you.
d) Take the flat stone and throw it on the flat dice.
Teacher’s Role

After teaching and supporting indigenous games, the teacher will allow children to choose games at their own level of ability. Occasionally the teacher will need to make rules or change the game to develop higher thinking skills in the children. Ludo and Snakes and Ladders may be good for learning number concepts in Class I and II. After that, games must be more challenging. As a teacher you will be able to observe when children need introduction to more challenging games.

You can paint or arrange a Flat Dice on the floor with writable surface to write numbers. Leave the spaces empty. Use chalk to fill in the numbers required. Then the dice can be used for higher numbers also. It can also have a ‘ZERO’ in one of the squares. You will need to give higher classes further challenges by using larger numbers. Also search for dice games that have more rules for higher classes. Some children in higher classes still need plenty of practice with addition and multiplication of small numbers.

Below are some samples.

Suggested activities:

1. Dice Games
2. Playing Worms

e) If you get 2, then take 2 stones from the pile.

f) Take turns to throw the flat stones on the flat dice and collect stones according to the number on the dice.

g) Roll the flat stone 5 times and count your total.

h) Compare your total with your friends’ total.

i) The person who has closest to 20 wins one point.

j) Play this game until one person gets 5 points.
Variations of the game.
Throw two flat stones together, add both numbers, and then take that amount of stones from the pile. Whoever is closest to 70 after five turns gets a point.

or

Change the numbers in the Flat Dice to give practice of adding different numbers.

or

Multiply the two numbers. Whoever has the highest number after five turns gets a point.

or

Put in 10 and multiples of 10 in the Flat Dice so children get practice of adding 10's.

a) After throwing the two flat stones, subtract the lowest number from the highest number. Take five turns. Whoever has the highest number after 5 turns gets a point.
b) After throwing the two flat stones, subtract the lowest number from the highest number. Take five turns. Whoever has the lowest number after 5 turns gets a point.

Activity 2: Playing Worms

All Classes

a) Two, three or four children can play.
b) Draw a Flat Dice on the floor and fill in numbers of your choice. Or use the Flat Dice that is already made on the floor.
c) Each player needs to draw a worm like the one shown. The worms can be drawn with chalk on the cement or on a piece of paper.
d) Take turns to throw the flat stone on the Flat Dice. Whatever number you get on the dice must be doubled. Enter that number in a circle of the worm.
e) When your worm is full exchange it with your friend.
f) Then take turns to throw the flat stone again.
g) If you get a score that is one half of a number on your worm, cross out that number. Otherwise wait for your turn.
h) The first person to cross out all their numbers wins.

Throw two flat stones on the Flat Dice. Add both the numbers and double their total.

or

Use one flat stone. Throw it and multiply by 10...or...5. Enter that number on your worm. Continue as before.

or

Put all even numbers in the Flat Dice. Throw two flat stones and multiply the addition of these two numbers by ½. Enter the number on your worm. Then exchange your worm with your friends and start playing again. Throw 2 flat stones. If you get a number that is double a number on your worm, cross it out. The first person to cross out all their number wins.

More variations can be devised by you and the children. This will enhance their creativity and power to think.
Introduction

This is a learning resource on the floor for numbers and language that can be used by children in small groups after the teacher has done some exercises with them. This floor element can give number concepts and help children to practice addition, subtraction, multiplication and division. It can also be used for language development.

Objectives

1. To learn numbers.
2. To learn to write properly standardized numbers.
3. To practice concepts of addition, subtraction, multiplication and division.
4. To invent new games.
5. To learn concepts of ‘greater than’ and ‘smaller than’.
6. To tabulate data.
7. To understand concepts of fractions.
8. To develop language.

Teaching-Learning Activities

Activity 1: Counting with Concrete Objects

Classes I, II

Learn numbers along with concrete objects such as stones or seeds.

In class 1, children can become familiar with the concept of one more and one less through many songs. They also must have many experiences of counting with stones and seeds. All children must understand that 6 means six objects. To practice, the teacher can write any number in the Goltara and have children put that number of stones in the proper space.
Teacher’s Role

First, the teacher must work with the children and then encourage children to practice by themselves. While the Goltara for activities is made on the floor the teachers will find some Goltaras painted on a writable surface on a nearby wall. Some of these Goltaras may be blank, while others may have some examples to be used as a guide. The teachers may use the blank Goltara to explain an activity, while children may undertake the activity on the floor Goltara.

The teacher needs to encourage children to make changes in the games and develop new rules and strategies. The teacher can add new numbers everyday to give children practice in larger or smaller numbers depending on the age and academic level of children.

Suggested Activities

1. Counting with Concrete Objects
2. Addition and Subtraction: Five Games to Play
3. Multiplication
4. Fractions
5. Language Games: Four Games to Play

Activity 2: Addition and Subtraction (Five games to play)

Classes I, II, III, IV, V

Game - 1: Addition

Teacher can prepare a Goltara on the board. He can write 2 in the middle and write 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, in the second ring. Children can then add 2 + 1 = 3, 2 + 2 = 4, 2 + 3 = 5. They must write the answer in the third ring. When they are familiar with this game they can play on the Goltara by themselves outside on the floor. The teacher
can increase the complexity of the game by adding 6 to the middle circle and putting 10, 11, 12, 13, etc around the second circle. The children will fill in the answers with chalk all by themselves.

**Game - 2: Addition Again**

In another game, the teacher can put 1 in the center circle, leave the middle circle empty and fill in the outer circles with numbers. Children then have to put in the proper number. For example 1 + ... = 5 or 1 + ... = 7

**Game - 3: Subtraction**

In a similar game have the children practice subtraction by putting 1 into the center circle, leave the middle circles empty and put larger numbers in the outer circle such as 4, 6, 3, 7, 9. Children then have to subtract and fill in the gap in the middle circle.

4 - ... = 1, 6 - ... = 1,

3 - ... = 1, 7 - ... = 1, 9 - ... = 1

**Game - 4: More Addition**

Another game for two children: take flat stones and stand 3 feet away from the Goltara. Goltara should be full of numbers with the largest numbers far away at the top. Each child will throw stones twice. Then add the two numbers. The children record the numbers. After ten turns add up the numbers. The child with the highest number is the winner. Can you develop a method of tabulating data? For example, how will children know that each child has had 10 turns?

**Game - 5**

a) Instead of trying to throw the flat stone and get the highest number ask children to throw the stone twice and subtract the two numbers. The children should try and get the maximum difference of the two numbers. For example, the child should try to get his stone on a larger number (15) and a low number (1) in order to get the maximum difference (15 - 1 = 14). After ten turns children can add up their numbers to see who has the highest score.

b) The above game can be played with variations. For example, in order to understand addition and subtraction of multiples of 10, the teacher can fill in the Goltara with 10 and multiples of 10 and play the above game.
c) Then, give further challenges by putting in 5 and multiples of 5 and play the above game. This is more difficult for children.

d) In higher classes, the above game can use larger numbers to give practice in mental addition.

e) Another variation would be to ask children to fill in the spaces with just odd numbers or even numbers and then play this game.

**Activity 3: Multiplication**

**Classes II, III, IV**

a) To practice multiplication, teacher can put a number in the centre, for example, 6 x. Then add whatever multiplication facts, he wants children to learn. When children become familiar with Goltara ask them to make up their own games or continue to practice by gradually increasing the difficulty of calculations.

b) The teacher can fill in numbers with 10 and multiples of 10 on the Goltara. Then play the game as mentioned earlier.

**Activity 4: Fractions**

**Classes V, VI, VII, VIII**

The teacher will first do this exercise on the chalkboard. Children will then practice in groups on the Goltara.

To practice fractions the teacher can put the number 1 in the inner circle and then an “=” sign and 2/3 in one blank space. The children will then need to fill in the remaining space on the circle. For example with 1 in the centre, the teacher can fill in the second circle with, 2/3, 1/3, 1/4, 1/2, 1/5, 2/5, 3/6, 4/10 and so on.

**Activity 5: Language Games: Four Games to Play**

**Classes II, III, IV, V, VI, VII, VIII**

**Game - 1: Connections**

Object of this game is to work together and find simple connecting words.

Ask three children to take a chalk. The teacher will put only one word in the center and children will write in connecting words until the goltara is full. As months pass by increase the complexity of words for higher classes.

Example: Circus, mela, sky, river, sadness, mystery, meditation

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_Goltara on Floor. Pre-painted numbers must be avoided on floor_  
_Pre-painted guide on walls can be made for using Goltara_
Game - 2: Connection with Cards

For this game two children can play by drawing cards out of a box turn by turn.

The teacher should put cards in a box with nouns and then increase the complexity by using abstract nouns, verbs or adjectives. As times passes and children become familiar with the activity.

If a child draws the card 'tree,' then she can place that card in the middle circle just above the row. Then she must write down words that are connected to a tree, in the two spaces below. It could be 'leaves', 'bird'. If her friend does not understand the connection of tree to bird, she can ask for an explanation.

The next child may draw the card with 'dog' on it. Place this card above her row and take the chalk and write 'puppies' or 'barking' or 'guard' or 'pet' or 'german shepherd' or what ever connection the child wishes to make.

When all children have played this game over a time of two weeks, the teacher can write new cards and let the children find new 'connections'. By this time the teacher will have noticed which children can be given more challenging words and which children still need practice with common words. For classes IV, V and VI make the words more abstract. Increase the complexity as the months go on.

Example: Whistle, blowing, tracks, cell, blade, leaf, light, whisper.

Game - 3: More Connections

(i) In classes IV to VIII, make new rules. The teacher can start by writing a word on the cards that are nouns and let children write connecting words that are action words (verbs) and descriptive words (adjective). For example, if a child draws a card that says 'smells', children may write 'socks' and 'awful' or 'frying' and 'delicious' or 'burning' and 'smoky'.

(ii) Draw adjectives from the box and let children find a connecting nouns and connecting verbs.

(iii) As children become more creative and involved, take a chalk and extend the Goltara so they can write more 'connecting' words such as:

'Light' connecting words may be: sun, bulb, fluorescent, lamp, day, full moon, feather, weight, torch, lantern, candle, smoke.

Other more challenging words to put on the cards may be: Whistle, poem, train, meta, policeman, wind, song, penalty, race.

If one of the children do not understand their partners connecting words, she must challenge him to explain. For example, what is the connection of smoke to 'light'?

Answer: 'The smoke rose lightly into the sky.' or 'Smoke is light not heavy.'
Game - 4: Word Families

To teach word families, the teacher can make cards and ask children to write rhyming words with the same endings such as 'fly', 'soon', 'day'. Other children can be encouraged to find rhyming words that rhyme but do not spell the same, such as 'blue', 'flew', 'through', 'queue', etc.

Space for Notes
**31 Mystery Wall**

**Introduction**

Children love little peeping holes, climbing places and hiding places. Your Mystery Wall can be straight, at an angle or oval to provide dimension to the area in the playground. It can be close to a counter and be used to display the craft activities or objects from the shop. It should not be high, just in case children fall, but it can be a lovely place to run around or climb when children play tag or hide and seek.

If the Mystery Wall is facing south or get sun light during school hours, it can be used as a counter for science experiments.

The Mystery Wall can have a pretty jaali and various shapes of holes that allow pleasant shadows to fall to the ground.

The Mystery Wall could also be close to trees. If that is not possible, plant fast-growing trees such as Acacia and one slow growing tree that will outlast the Acacia. The Mystery Wall then, could be used throughout the year.

**Teaching-Learning and Fun Activities**

**Activity 1: Playing and Inventing Games**

All Classes

All classes will be inventing their own games and developing their own strategies as they play around the Mystery Wall, the Counter and the cozy corners in the playground.

**Activity 2: Drama**

All classes

Drama comes naturally to children. The Mystery Wall can be the back of an improvised stage for drama that children
Teacher’s Role

Children need time to organize their own play without adult interference. Do not always caution children not to jump or run. They must run, jump, and climb to gain physical dexterity and strength. They need a variety of activities - some quiet places and some active places. To enrich play, the teacher should also encourage children to bring-in collected materials that can be used in fantasy play around the counter, the mystery wall or at other cosy places outside the school. A box can store these collected things inside a classroom and children can take it outside during recess and lunch time. A list of collected materials for the fantasy area is given in the annexure II.

Objectives

1. To develop positive disposition towards school.
2. To develop creativity and curiosity.
3. To promote physical development.
4. To promote large motor muscle development.

Suggested Activities

1. Playing and Inventing Games
2. Drama
   - Puppets
   - Window Frames in Mystery Wall

prepare and present by themselves. It is easy to imagine someone chatting through the windows of the mystery wall to the passers by on the street. Or someone may be staring out of the windows to watch a horseman approaching. The windows in the mystery wall provide a frame for puppet shows. They can also double up as a TV screen for announcements, news reports and so on.

Of course, a teacher needs to be supportive. If props such as old clothes, musical instruments, masks, or furniture are required, she can help children obtain them. She also needs to provide a place for storage.
**Introduction**

This is a simple scientific instrument, that children will enjoy using. The wonders of science, the fact that science can be mysterious and exciting, will encourage children to enjoy scientific studies. They may like to put different pictures in front of the periscope and ask their friends what they see. It must be located where something that cannot be seen normally is seen through the Periscope.

**Suggested Activity**

A periscope is only one of many things that can be constructed in your school. The periscope is not difficult to build. Children can use it as a video phone.

Besides this there are inexpensive books that guide children in many construction activities. These activities require only collected materials and very inexpensive equipment from the cycle shop such as tubing or buttons which are found in every home.

To understand the concepts of hydraulics and suction get the book “Pumps from the Dump” by Arvind Gupta (see annexure I).

Some other books which will give hours of hands-on of pleasure are listed in the annexure.

### Activity 1: Periscope as a Video Phone

**All Classes**

The Periscope can be used to communicate by speaking and listening from both ends. In addition, it also allow children to see each other from both ends. Thus, it can be used as a video phone. It can be great fun for all.

Looking from the ground into first floor or the terrace

Periscope in a discovery room
Teacher’s Role

To encourage children’s curiosity and interest in science you need to have many experiments and activities happen in school.

What are other simple scientific equipment that you can keep in your school?

If your school does not have a budget, can you get small donations from your local bank or industry? May be, parents will donate equipment that is needed. You can even install a Periscope to peep into a high bird feed or a bird habitat on a tree, secretly! See Inviting More Birds and Bees (44).

Make a wish list. It can include:
- a microscope
- a magnifying glass
- weighing scales
- thermometer, barometer
- micrometer
- stop watch—used to time the distances run by athletes
- old machines to take apart—typewriters, phones, calculators, clocks, radios, old irons,
- old mixers - to take apart
- stethoscope
- soldering irons
- tools—pliers, hammer, vise
- measuring cups and spoons

There are suppliers who manufacture and supply them at very low cost.

Objectives

1. To encourage curiosity, logical thinking, concept development and use of all five senses.

Space for Notes