

Design Course

## Flipbook Animation

Art of Making Flipbook

by

Prof. Phani Tetali and Geetanjali Barthwal

IDC, IIT Bombay

Source:

<https://www.dsource.in/course/flipbook-animation>



1. Introduction
2. Mechanism
3. Features
4. Creative Story Ideas
5. Materials Used
6. The Making
7. Do's and Dont's
8. Links
9. Video
10. Design Tools
11. Contact Details

Design Course

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Source:

<https://www.dsource.in/course/flipbook-animation/introduction>

## Introduction

Flip book is a bundle of drawings drawn in a movement on the paper. It is the most easiest and interesting method to make animation. It gives leisure to have fun with even rough drawings.



*Flip book.*

1. Introduction
2. Mechanism
3. Features
4. Creative Story Ideas
5. Materials Used
6. The Making
7. Do's and Dont's
8. Links
9. Video
10. Design Tools
11. Contact Details

Design Course

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Our mind is capable of making stories. And, ideas just come and go in a moment. Putting down those ideas in the form of drawing, telling a narrative is actually a creative exercise.



*Small bundle of stories.*

1. Introduction
2. Mechanism
3. Features
4. Creative Story Ideas
5. Materials Used
6. The Making
7. Do's and Dont's
8. Links
9. Video
10. Design Tools
11. Contact Details

Design Course

## Flipbook Animation

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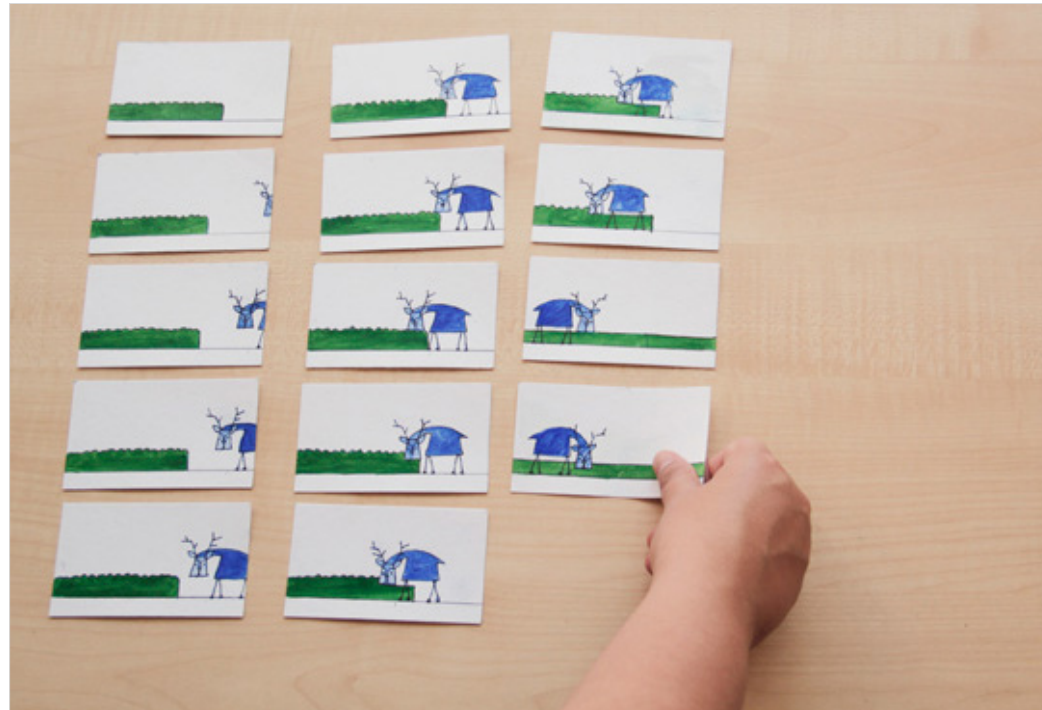
Source:

<https://www.dsource.in/course/flipbook-animation/mechanism>

## Mechanism

The mechanism behind flipbook is the flipping movement of paper, which gives an illusion of motion to the static drawings.

- Each successive frame may show movement by drawing the object in a different location.



*Showing the movement of the deer.*

1. Introduction
2. Mechanism
3. Features
4. Creative Story Ideas
5. Materials Used
6. The Making
7. Do's and Dont's
8. Links
9. Video
10. Design Tools
11. Contact Details

Design Course

## Flipbook Animation

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Source:

<https://www.dsource.in/course/flipbook-animation/mechanism>

- Change of any action at the same position.



*Change of action at the same position.*

If you want to show some stationary elements then you have to trace them in each frame. For Eg. Most of the time a background remains the same etc.

1. Introduction
2. Mechanism
3. Features
4. Creative Story Ideas
5. Materials Used
6. The Making
7. Do's and Dont's
8. Links
9. Video
10. Design Tools
11. Contact Details



Design Course

## Flipbook Animation

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Flip book is also more popular because of its small size. It can be called as a tangible version of animation in a product form which makes it unique. This is how flipbook derives its name by constant change of elements creating an illusion to the human eye.



*Flipbook with different sizes.*

1. Introduction
2. Mechanism
3. Features
4. Creative Story Ideas
5. Materials Used
6. The Making
7. Do's and Dont's
8. Links
9. Video
10. Design Tools
11. Contact Details

Design Course

## Flipbook Animation

Art of Making Flipbook

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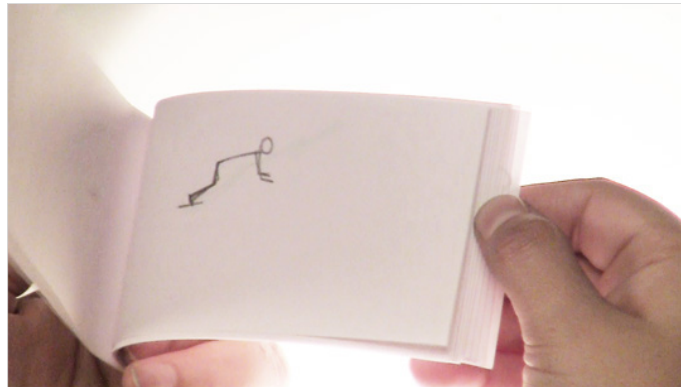
Source:

<https://www.dsource.in/course/flipbook-animation/features>

## Features

The best features of a flipbook are:

- It brings simple rough drawings to life with just flipping of pages. Unlike any artistic medium, flipbook is comprised most of rough drawings and mostly simple figures.



*The rough simple drawings.*



*Working while flipping.*



*Tracing the drawings.*

1. Introduction
2. Mechanism
3. Features
4. Creative Story Ideas
5. Materials Used
6. The Making
7. Do's and Dont's
8. Links
9. Video
10. Design Tools
11. Contact Details

Design Course

## Flipbook Animation

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- It doesn't require any camera or other external device. Hence, one need not carry high technical stuff but only a pencil and a paper to start with.



*Technical Equipments.*



*Pencil, eraser and paper pad.*

Flip book can also be created digitally, which is then printed out.

1. Introduction
2. Mechanism
3. Features
4. Creative Story Ideas
5. Materials Used
6. The Making
7. Do's and Dont's
8. Links
9. Video
10. Design Tools
11. Contact Details



Design Course

## Flipbook Animation

Art of Making Flipbook

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Source:

<https://www.dsource.in/course/flipbook-animation/creative-story-ideas>

## Creative Story Ideas

How Does Flipbook Works:

One can tell a small story by drawing on a flipbook. The mechanism behind flipbook is the illusion of motion by flipping of static drawings. All kinds of films, both animation and live action are the best examples of how motion brings illusion of life to a human eye.

Ideas keep coming and going in our mind within fraction of seconds. When these simple ideas are put down in the form of a drawing a story can be created. So start making your own films with creative ideas.

Think of Creative story ideas:



1. Introduction
2. Mechanism
3. Features
4. Creative Story Ideas
5. Materials Used
6. The Making
7. Do's and Dont's
8. Links
9. Video
10. Design Tools
11. Contact Details

Design Course

## Flipbook Animation

Art of Making Flipbook

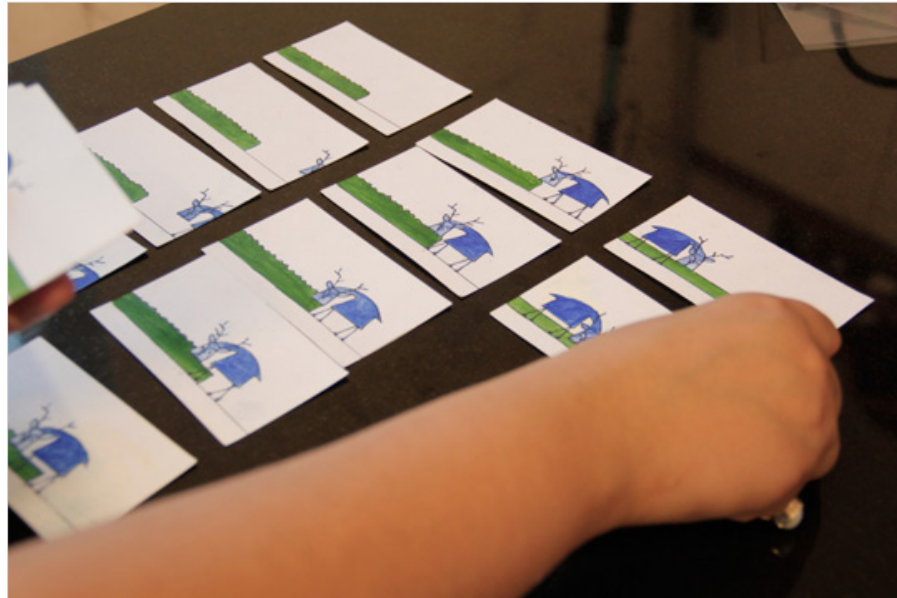
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Story Idea - 1.



1. Introduction
2. Mechanism
3. Features
4. Creative Story Ideas
5. Materials Used
6. The Making
7. Do's and Dont's
8. Links
9. Video
10. Design Tools
11. Contact Details

Design Course

## Flipbook Animation

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Source:

<https://www.dsource.in/course/flipbook-animation/materials-used>

## Materials Used

The materials used in making flipbook are as below:

- **Pencil and Eraser:**

Pencil and eraser gives liberty to correct the work at any point of time. After a bit of acquaintance with the method and material anyone can draw directly with pen on paper also. One can also use pen and coloured markers for the final look.

- **Big paper clips/ Elastic bands/ Stapler:**

You can also use big paper clips or elastic bands or stapler to bundle the drawings.

- **Paper pad and Coloured Post-it:**

A paper pad, coloured post it, is ready to use material but a stack of paper gives more liberty to add and remove frames at any point of time.



Materials required.

1. Introduction
2. Mechanism
3. Features
4. Creative Story Ideas
5. Materials Used
6. The Making
7. Do's and Dont's
8. Links
9. Video
10. Design Tools
11. Contact Details

Design Course

## Flipbook Animation

Art of Making Flipbook

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Source:

<https://www.dsource.in/course/flipbook-animation/materials-used>

### • Light Table:

Light table is used to trace the drawing with reference to other drawings. If you don't have a light box, you can also use a window with adequate lighting. A carbon or tracing paper can also be used as an alternative.



*Light box for animation.*

So try to create flipbooks and have fun with your drawings.

1. Introduction
2. Mechanism
3. Features
4. Creative Story Ideas
5. Materials Used
6. The Making
7. Do's and Dont's
8. Links
9. Video
10. Design Tools
11. Contact Details



Design Course

## Flipbook Animation

Art of Making Flipbook

by

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Source:

<https://www.dsource.in/course/flipbook-animation/making>

## The Making

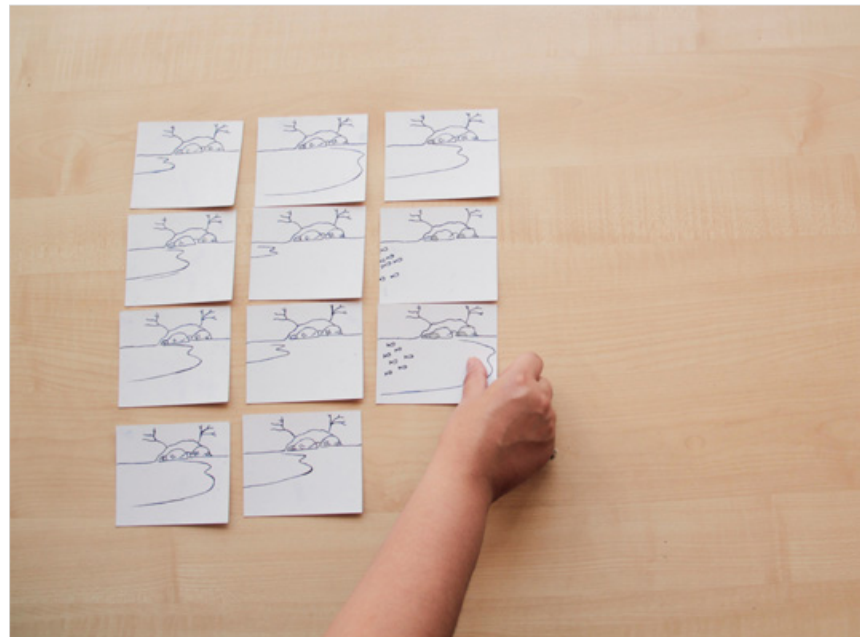
The process of making a flipbook is explained below in 5 simple steps.

### Step 1:

To make a flipbook animation, one can start with taking a pencil and a paper stack of small size like 5 to 2.5 inches or any other size. The size of animation and its subject is not restricted. One can use a note book or a paper stack for drawing.

Before starting, the approach of the work has to be understood. There are two ways.

- Try making a storyboard with pose-to-pose technique.
- Or else, drawing directly on paper using straight-ahead technique.



1. Introduction
2. Mechanism
3. Features
4. Creative Story Ideas
5. Materials Used
6. The Making
7. Do's and Dont's
8. Links
9. Video
10. Design Tools
11. Contact Details

Design Course

## Flipbook Animation

Art of Making Flipbook

by

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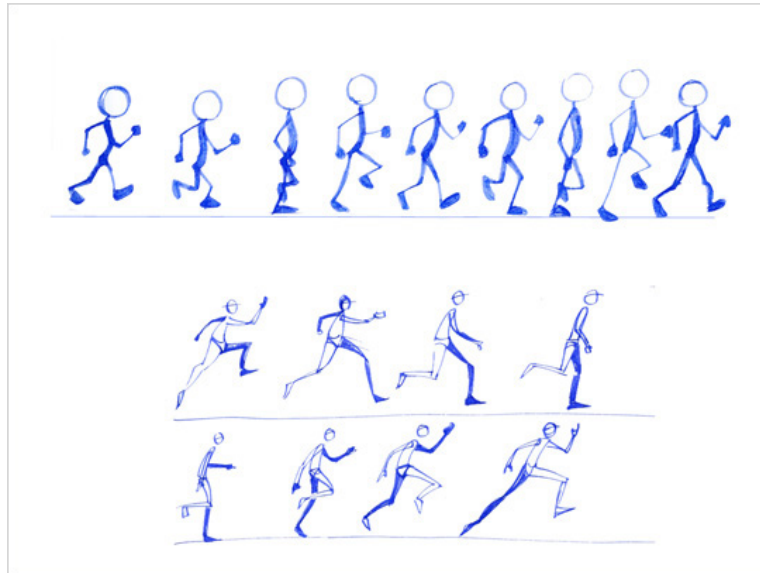
<https://www.dsource.in/course/flipbook-animation/making>



Story board preparation for flipbook.

### Step 2:

Moving on to the second step, take a simple stick figure, like a short cyclic action which changes into a loop animation. For instance, activities like walking, running, jumping etc.



Cyclic / Loop animation.

1. Introduction
2. Mechanism
3. Features
4. Creative Story Ideas
5. Materials Used
6. The Making
7. Do's and Dont's
8. Links
9. Video
10. Design Tools
11. Contact Details

Design Course

## Flipbook Animation

Art of Making Flipbook

by

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Source:

<https://www.dsource.in/course/flipbook-animation/making>

### Step 3:

With the third step the animator decides how a character will behave in its line of action and path of action. This is the time when a light box is helpful in tracing and tracking a path more comfortably. During this step of creating frames, placement of paper and its drawings has a major role. Light box helps to imitate the earlier drawing with reference to the latter.



*Tracing the drawings*

### Step 4:

In fourth step, the actual process of drawing starts. You have to draw the pre-planned key frames from the earlier stage and then keep adding or subtracting the frames for a smoother look.

1. Introduction

2. Mechanism

3. Features

4. Creative Story Ideas

5. Materials Used

6. The Making

7. Do's and Dont's

8. Links

9. Video

10. Design Tools

11. Contact Details

Design Course

## Flipbook Animation

Art of Making Flipbook

by

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Source:

<https://www.dsource.in/course/flipbook-animation/making>

After drawing stick human figure in the fourth step, flip the paper for testing of animation.



*Flipping and Testing.*

1. Introduction
2. Mechanism
3. Features
4. Creative Story Ideas
5. Materials Used
6. The Making
7. Do's and Dont's
8. Links
9. Video
10. Design Tools
11. Contact Details



Design Course

## Flipbook Animation

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### Step 5:

The fifth step is important to understand, especially for those who have followed the straight-ahead animation principle. In straight ahead, the final animation might end up being of long duration, so one has to keep a check on the narrative, by flipping the drawings and keeping the story interesting. Thus, it is better to draw less frames, say 20 to 40 for any movement or sequence.

In a pose-to-pose animation, the number of frames is already defined or pre-planned which will be a conscious decision by the animator. The restriction on the number of frames may be because of many reasons, for feasibility in flipping paper, for better attention span or for cutting down laborious work.

### Source:

<https://www.dsource.in/course/flipbook-animation/making>

1. Introduction
2. Mechanism
3. Features
4. Creative Story Ideas
5. Materials Used
6. The Making
7. Do's and Dont's
8. Links
9. Video
10. Design Tools
11. Contact Details

Design Course

## Flipbook Animation

Art of Making Flipbook

by

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Source:

<https://www.dsource.in/course/flipbook-animation/dos-and-donts>

## Do's and Dont's

Do's and Don'ts while making a flipbook.

- **Movement or Change in action:**

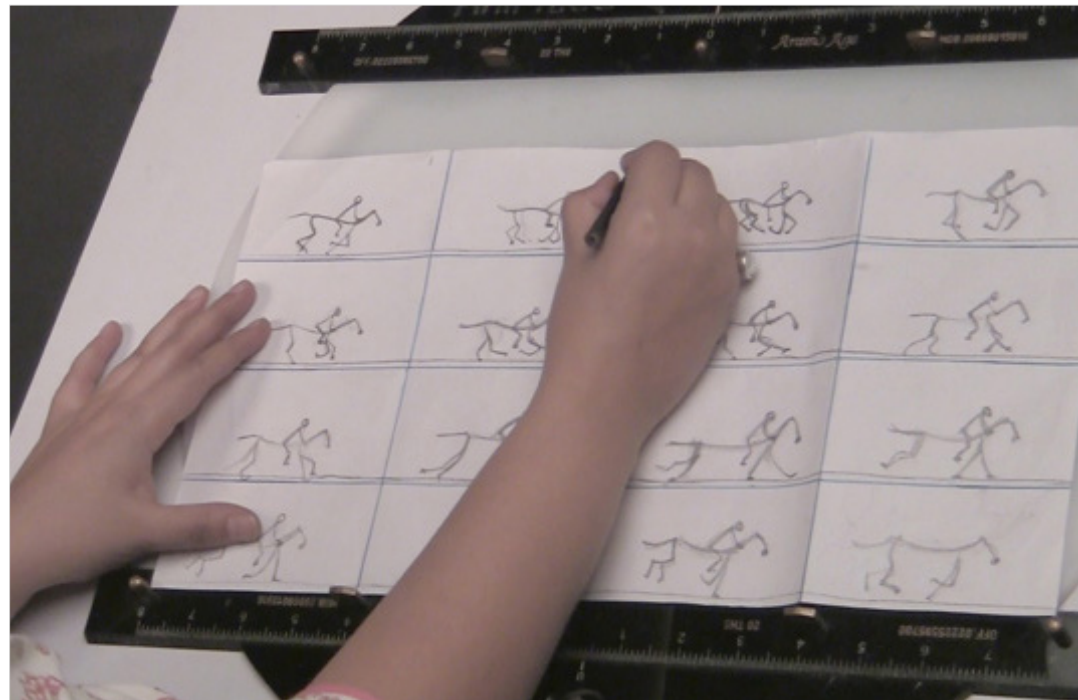
You have to keep in mind whether,

- You want the movement across the paper
- or, only need the change in action.

If you are finding it difficult how and what to draw use simple stick figures or get references from the links given in the reading section.

- <http://www.eadweardmuybridge.co.uk/>

- <http://www.muybridge.org/>



Horse rider- storyboard.

1. Introduction
2. Mechanism
3. Features
4. Creative Story Ideas
5. Materials Used
6. The Making
7. Do's and Dont's
8. Links
9. Video
10. Design Tools
11. Contact Details

Design Course

## Flipbook Animation

Art of Making Flipbook

by

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Source:

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- **Smooth transitions:**

Smooth transitions are important while making animation. So change the drawings with convincing movements.

**For Eg.**

A car changes to big guy in just another frame without smooth transition in shape and volume, this looks abrupt. That's why a light box or carbon paper is used for making gradual changes in frames.



*Smooth transitions of car in motion.*

1. Introduction
2. Mechanism
3. Features
4. Creative Story Ideas
5. Materials Used
6. The Making
7. Do's and Dont's
8. Links
9. Video
10. Design Tools
11. Contact Details

Design Course

## Flipbook Animation

Art of Making Flipbook

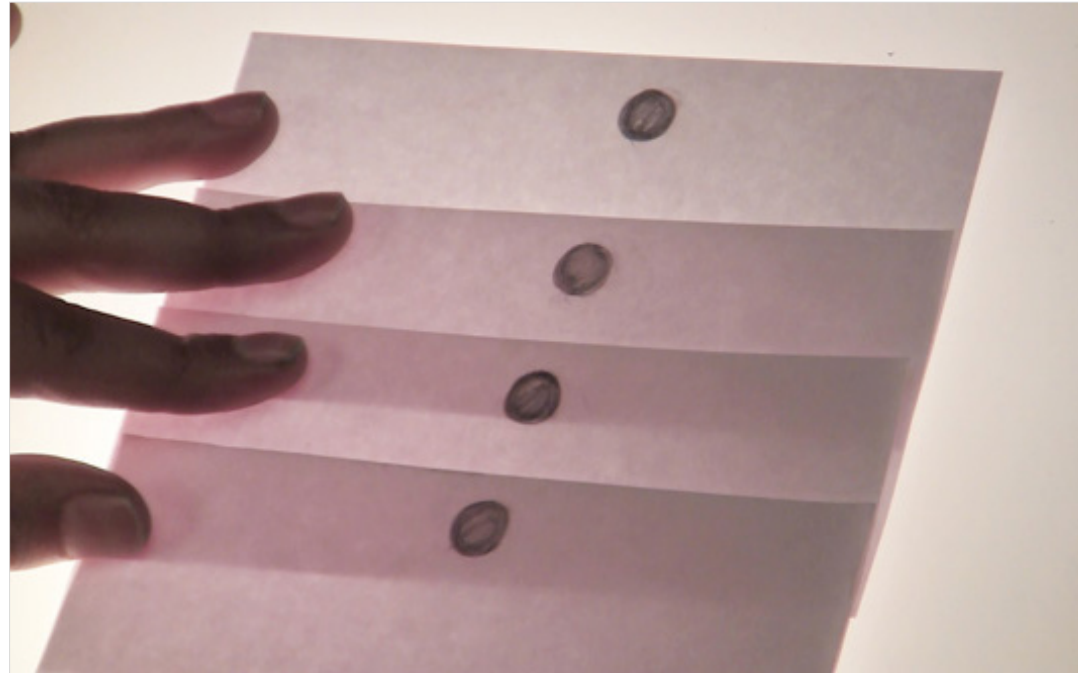
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*Smooth transitions of a ball in motion.*

• **Clean up:**

Clean up the frames with eraser, looking for any inconsistencies which may distract the animation and finalizing with colour pens.

1. Introduction

2. Mechanism

3. Features

4. Creative Story Ideas

5. Materials Used

6. The Making

7. Do's and Dont's

8. Links

9. Video

10. Design Tools

11. Contact Details



Design Course

## Flipbook Animation

Art of Making Flipbook

by

Prof. Phani Tetali and Geetanjali Barthwal

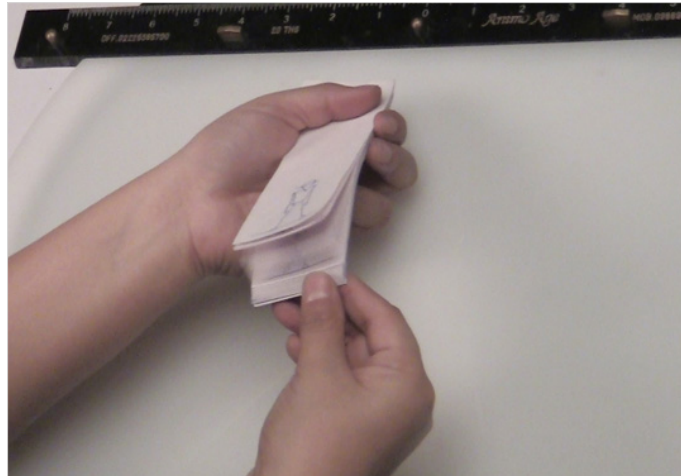
IDC, IIT Bombay

Source:

<https://www.dsource.in/course/flipbook-animation/dos-and-donts>

- **Extra length:**

Extra length should be avoided from the start. The paper stack should be of same dimension but if not then get rid of the extra length. Flipping is to be done in an angle so that the bottom of it is angled out. Simply attach the clip on the other side and flip away.



*Avoid extra length of flipbook.*



*Be a proud flipbook maker*



*Customize the flipbook for friends and family.*

1. Introduction
2. Mechanism
3. Features
4. Creative Story Ideas
5. Materials Used
6. The Making
7. Do's and Dont's
8. Links
9. Video
10. Design Tools
11. Contact Details

Design Course

## Flipbook Animation

Art of Making Flipbook

by

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IDC, IIT Bombay

Source:

<https://www.dsource.in/course/flipbook-animation/links>

## Links

References:

- <http://www.eadweardmuybridge.co.uk/>
- <http://www.muybridge.org/>
- <http://www.creativebloq.com/illustration/flip-book-animations-12121459>
- <http://www.youtube.com/watch?v=FH97UerMW6I>
- <http://www.youtube.com/watch?v=OoFUtoyr7i0>

• Music:

<http://www.jamendo.com/en/track/858544/fade-away>

• Album:

Echoes And Frames by Alexander Franke



1. Introduction
2. Mechanism
3. Features
4. Creative Story Ideas
5. Materials Used
6. The Making
7. Do's and Dont's
8. Links
9. Video
10. Design Tools
11. Contact Details

Design Course

## Flipbook Animation

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Source:

<https://www.dsource.in/course/flipbook-animation/video>

## Video



Flip Book Animation - Making



Flip Book Animation - Features

1. Introduction
2. Mechanism
3. Features
4. Creative Story Ideas
5. Materials Used
6. The Making
7. Do's and Dont's
8. Links
9. Video
10. Design Tools
11. Contact Details

Design Course

## Flipbook Animation

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Source:

<https://www.dsource.in/course/flipbook-animation/design-tools>

## Design Tools

### Animation Design:

Animation is a method of photographing successive drawings, models or even puppets to create an illusion of movement in a sequence. Animation Tool is developed by IDC, IIT Bombay. It is an interactive web space where students can learn about the basics of animation. There are four main types of animation that are commonly used: 2D Traditional Animation, 2D Computer Animation, Stop Motion Animation, and 3D Computer Animation. There's also something called Experimental animation, where you can mix different types of animation together. The Animation Tool teaches things like Straight Ahead, Pose to Pose, Stretch and Squash, and Slow in Slow out, which are all important for making animations look good.

For more information visit: [https://dsource.in/tool/animation\\_tool/](https://dsource.in/tool/animation_tool/)



1. Introduction
2. Mechanism
3. Features
4. Creative Story Ideas
5. Materials Used
6. The Making
7. Do's and Dont's
8. Links
9. Video
10. Design Tools
11. Contact Details



Design Course

## Flipbook Animation

Art of Making Flipbook

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## Contact Details

This documentation for the course was done by Geetanjali Barthwal, IDC, IIT Bombay.

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1. Introduction
2. Mechanism
3. Features
4. Creative Story Ideas
5. Materials Used
6. The Making
7. Do's and Dont's
8. Links
9. Video
10. Design Tools
11. Contact Details