



# Ammachi's Amazing Machines

## Activity Sheet for Students

[letsread.asia/Ammachi](https://letsread.asia/Ammachi)



**Ammachi's Barfi was made with a lot of hard work. But these hard work can be made easy by using simple machines. Do you remember how Ammachi wore a helmet and climbed a tree to pick the coconut?**



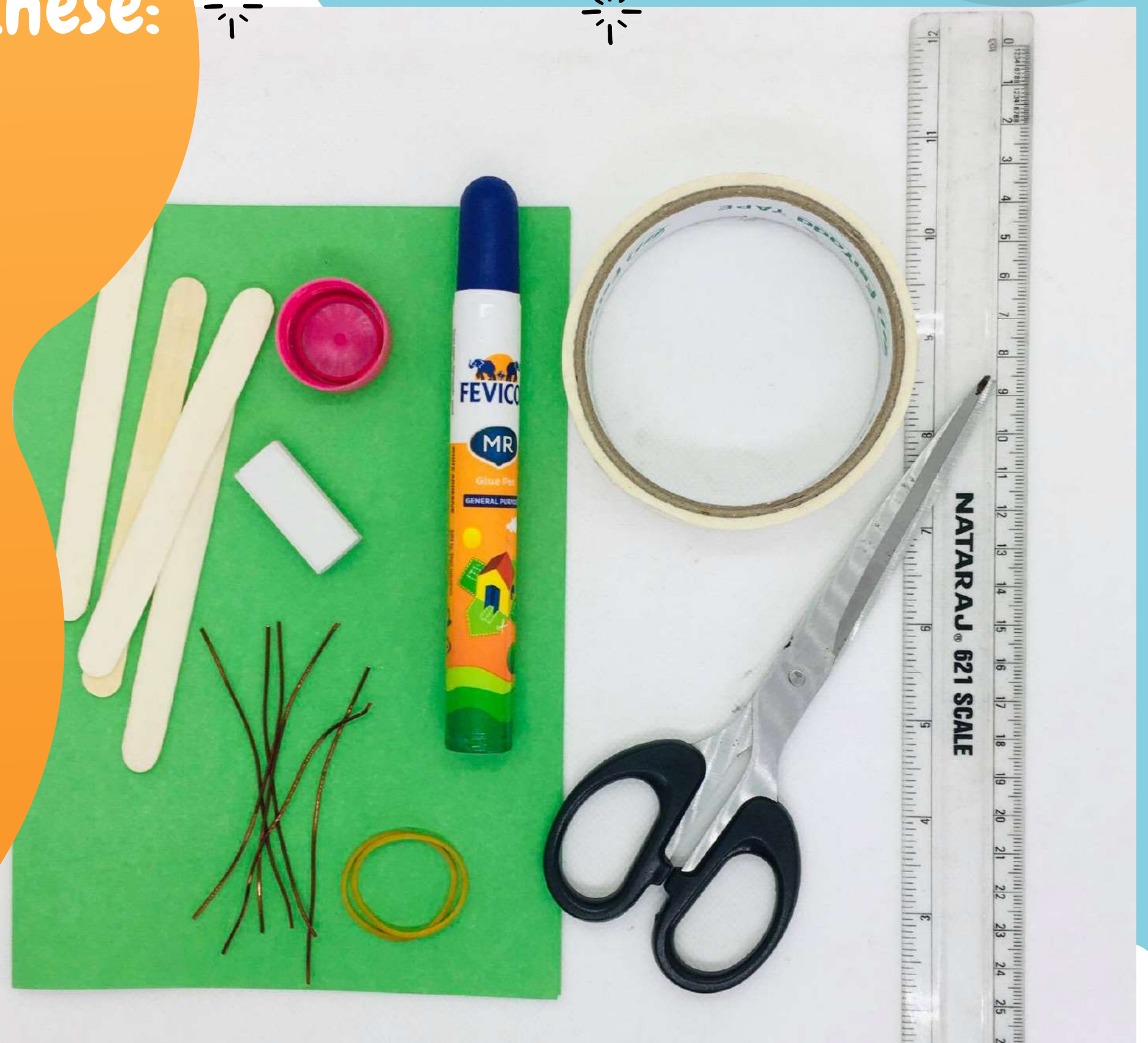
**Don't you think it's very risky for her to climb the tree at her age? Can you design a machine to help Ammachi pick the coconut without climbing the tree?**

**One way to help Ammachi is by building a catapult.**



**Before we start making, Make sure to have these:**

1. Popsicle sticks
2. Rubber bands
3. Bottlecaps
4. Eraser
5. Ruler
6. Scissors
7. Masking tape
8. Colorful paper
9. Thin Copper Wire
10. Glue





# Let's make a catapult



Step 1

Place one popsicle stick between the other two as shown. Secure the sticks using rubber bands.



Step 2

Paste a bottle cap using masking tape.



Step 3

Place an eraser between the two popsicle sticks as shown.

# Let's make a Coconut Tree



Step 1

Take a green colour paper and cut it into 6 small rectangles of 4 cm x 7 cm.



Step 2

Fold the rectangle into two half and glue a copper wire in between.



Step 3

Cut the paper into the shape of a leaf as shown.



Step 4

Fold the paper in another direction to form a crease and unfold it again.



Step 5

Cut the paper in a way it looks like a coconut tree leaf.



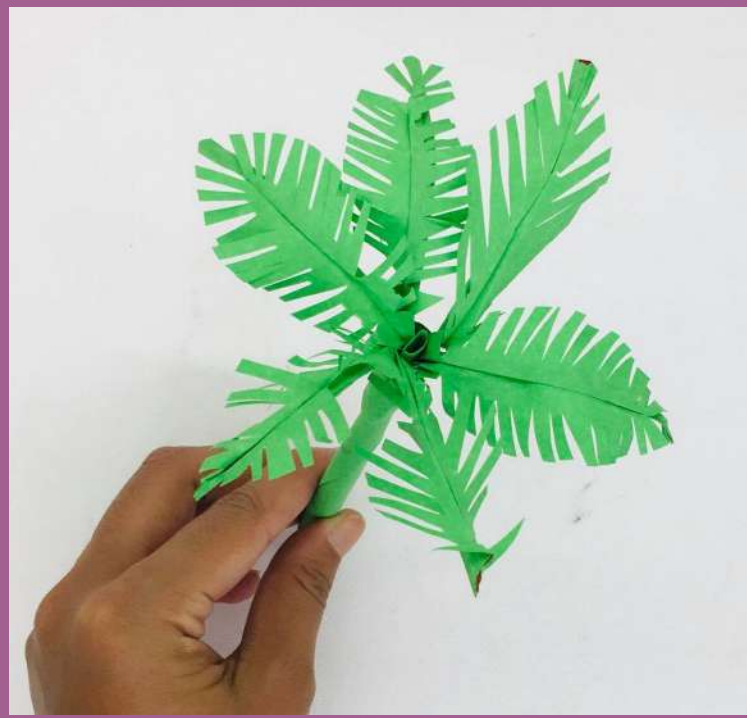
Step 6

Repeat steps for all 6 rectangles. So that you have 6 leaves in total.



### Step 7

Roll a paper as above. Don't forget to glue the end. This will be the trunk of our tree.



### Step 8

Now, Glue the leaves at the top of the trunk.



### (Final View)

Now, Decorate your tree.

## Let's Play with your Catapult

Use small paper balls to hit the paper coconut tree. Try to complete the following challenges.

### Congratulations!

Now, Ammachi won't have to climb the tree to get the coconut.



## Challenge Your Skills

1. Use the catapult to hit a specific target on the tree.
2. Convert the catapult into a fun game which can be played by two or more people.

(Hint: set rules, rewards, and fun penalties based on scores)

## Challenge Your Mind

1. What is the role of the rubber band and eraser in your catapult?
2. If you launch a piece of eraser and a paper ball of the same size, which one travels further? Why?
3. What other simple machines are there in your house?

# Ammachi's Amazing Machines

## WORKSHEET



Challenge your friends to a friendly catapulting match. Put the coconut tree at different distances from your catapults and hit it with paper balls. Each player gets 3 shots, whoever hits the tree the maximum number of times wins.

Fill your scores in the score sheet below.



Player's Name	The Distance of the Coconut Tree			Total Score
	20 cm	30 cm	40 cm	
Aaron	3	1	2	6



# Ammachi's Amazing Machines

## HANDOUT

### The simple machine behind the Catapult



The catapult that you made today is a kind of a lever. A lever has a bar and three points. They are the load, the effort, and the fulcrum through which the lever moves. Levers can be of three types, depending on which one of those three points is in the middle of the bar. Find out what type of level your catapult is by discussing with your friends and your teacher.

