

# KNOWLEDGE TRIBE

The Home of the Knowledge Community!



## India's Youngest Palaeontologist

Aswatha  
Biju

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& Interesting videos

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# KNOWLEDGE TRIBE

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# India's Youngest Palaeontologist

## Aswatha Biju



● **Knowledge Tribe: Firstly, tell us, what does a palaeontologist do?**

**Aswatha Biju (AB):** In the field of palaeontology, we read the fossil records and history to know the stages involved in the creation of a fossil. This indicates how far the creature survived, how it got extinct, how it adapted to the climatic changes, and its habitat. This is what a palaeontologist mainly does.

● **KT: How did you realise your passion for this field and eventually get into it?**

**AB:** When I was five years old, my father bought me an encyclopaedia. Whenever I received any book, I used to love looking at the pictures. So, when I was flipping through the pages of the encyclopaedia, I came across this photograph of a beautiful 'shell'. I told my mother that I wanted it somehow. She replied that they weren't shells, but fossils. She also told me that it is not possible to own them, because they belonged to the Government. But, I learnt that we could go to the Government Museum in Egmore, Chennai, and look at some fossils there.

I still remember how excited I was when I first saw the ammonite fossil there. I think that is when I started becoming so passionate about fossils. Since then, I have been to the museum more than 14 times just to see that fossil. Slowly, I started to collect fossils at various places. One day, I called up the Head of the Department (HOD) of the Marine Biology Department at Bharathidasan University. I asked him if I could show him my fossil collection and learn more about them, and he agreed. Unfortunately, when we went to the university, he was not available. Later, I met Dr. Mu. Ramkumar from the Geology Department at Periyar University. He taught me A-Z of fossils- what they are, how they are formed, what they are made of, and so on. I also learnt from him, that many of the items in my collection cannot be classified as fossils, as they were less than 20 years old. I was really curious to know how I can find more fossils, so he gave me a route map and marked all the fossil hotspots on it. This is how it all started.

● **KT: How do you hunt for fossils, and what are the steps that you follow after finding one?**





**AB:** I have a map of Cretaceous of Trichinopoly, which was given to me by geologist Mr. S. Prasad of Tamil Nadu Cements Corporation Limited (TANCEM), Ariyalur. The map has different places where fossils can be found in the region. Using this, I look for the different layers of fossil, starting from the youngest to the oldest bed layer, and collect them. I also note the GPS co-ordinates so that it will be helpful for other palaeontologists during fossil collection. So far, I have collected 74 fossil specimens of invertebrates from the Cretaceous Period, from the Ariyalur bed.

After collecting the fossils, the hardest step is the cleaning. In their raw form, fossils are hard like rocks, due to the deposit of sedimentary soil on them. So, they have to be soaked in water for up to a week and then scrubbed thoroughly with a spatula, to reveal the beautiful structures in them. This process is not easy. A lot of the times, our fingers become red or even get scratched. Once cleaned, the fossils have to be rinsed again. After this, the name of the fossil, the period to which it belongs, and other scientific details are recorded.

🍷 **KT: You also deliver seminars to college students, and to doctorate holders at geology institutes. Tell us about how you got the first opportunity to do so.**

**AB:** At first, many people did not believe that a student of sixth grade could deliver seminars to college students. Educational institutions are also restricted by their strict schedules, so it was difficult to get an opportunity. Finally, a few teachers encouraged me and gave me chances. Mrs. Uma from MMA Government Higher Secondary School, Pallavaram, Chennai, was one of them. She wanted me to conduct a seminar for the class 11 and 12 students of her school. Another teacher who encouraged me a lot is Dr. Jayanthi from Guru Nanak College, Chennai.

🍷 **KT: How do you manage school and your work in palaeontology?**

**AB:** I manage both easily. During examinations, revising is quite easy as I would have already studied the topics earlier. So, this gives me more time to learn about palaeontology.







## Achievements in Chess

♥ **KT: How do you stay updated with the developments in the field?**

**AB:** I have many mentors to help me out with this. Some of them are Dr. Mu. Ramkumar from Periyar University, Dr. Nagendra from Anna University, Dr. K. Ayyasami- Deputy General (Retd.), Geological Survey of India, Mr. S. Prasad from TANCEM in Ariyalur, Dr. S.M. Hussain from University of Madras (Guindy Campus) and Mr. Nirmal Rajah from UAE.

♥ **KT: Are there any tips that you would like to give to aspiring palaeontologists?**

**AB:** Yes. There are a few things that I was taught by my mentor, Dr. Mu. Ramkumar. The important one is - while hunting for fossils, always limit the number of specimens that you collect, so that future palaeontologists can also hunt for them.

♥ **KT: Apart from palaeontology, we heard that you are quite a prodigy in chess as well. Tell us about this.**

**AB:** I started playing chess when I was two years old. When I was five years old, I opened my rating in chess, with a worldwide rank of 1345. At the age of seven, I got a rolling trophy in Chennai district. Then, I have also won a gold medal and a bronze medal at Asia level.

♥ **KT: Do you have any future plans in mind?**

**AB:** I want to become a palaeontologist. The field is not well-established in India, so I want to popularise it. I also want to study Earth Science in the field of palaeontology. ●



## Key Updates

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- Ms. Priyanka Rai from Dehradun, has become the first Climate Change teacher in India by completing Global Climate Change Teacher Course, accredited by the United Nations.
- Abhijit Banerjee and his wife Esther Duflo, and Michael Kremer have won the 'Economics Nobel for the year 2019' for their 'experimental approach to alleviating global poverty'.
- NASA astronauts Christina Koch and Jessica Meir replaced a broken part in the International Space Station's (ISS) power grid. This was the first successful all-female spacewalk on ISS.
- Lieutenant Colonel Swaroop Singh Kuntal became the fastest Indian to complete Ironman Malaysia triathlon in a record time of 12 hours and 14 minutes.
- A student of Delhi Private School Sharjah, Rishi Bhatnagar of Class 11, has made a smart device to reduce and monitor pollution from vehicle exhausts after seeing the smog in his home city of New Delhi, India.

**\*For the event venues and other details**

**Feature your knowledge event for FREE!**

[Click here](#)

[Submit Now](#)

# Knews

## We Remember...



### Lesser-known Facts About Milkha Singh

Milkha Singh, also known as The Flying Sikh, is an Indian former track and field sprinter. Did you know Milkha Singh has bagged two gold medals in the Asian Games, Tokyo in 1958. To know more facts about him, watch this video.

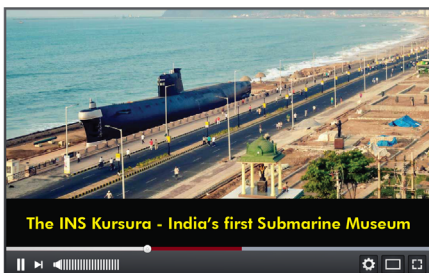
[Click to Watch](#)



### How does the Napier's Bones calculator work?

In this video, learn about a device called 'Napier's Bones'! It is a set of rods used to perform complex multiplication problems. Wonder how rods do multiplications? Watch the video.

[Click to Watch](#)



### The INS Kursura – India's Submarine Museum

The INS Kursura Museum is India's first Submarine Museum, located on Rama Krishna beach in Visakhapatnam, Andhra Pradesh. Watch this video to know more about the museum, where it was built and what were the purposes of the submarine.

[Click to Watch](#)





# Pickbrain's Challenge



## Giri 'Pickbrain' Balasubramaniam

Giri Balasubramaniam, better known as 'Pickbrain', is a noted quizmaster and co-founder of Greycaps, Asia's largest onstage quizzing and knowledge services company. He and his team have presented over 2,000 quiz shows across the world.

**We at the Knowledge Tribe, bring Pickbrain's exclusive quiz challenge to you. Are you ready?**



### 1. Identify this English children's book author.



- a. Beatrix Potter
- b. Anne Fine
- c. J.K. Rowling
- d. Enid Blyton

### 2. Which famous coffee chain owns a famous tea company called 'Teavana'?

- a. Starbucks
- b. Café Coffee Day
- c. Barista
- d. Costa Coffee

### 3. Lay's and Quaker Oats are brands owned by which famous corporation?

- a. Coca-Cola
- b. Tata
- c. PepsiCo
- d. None of the above



# Tease Your Brain

Mail us your answers to [neha@knowledgegetribe.in](mailto:neha@knowledgegetribe.in)

1

What is the next number in the sequence?  
3, 7, 10, 11, 12, 17, \_\_\_?

• 22

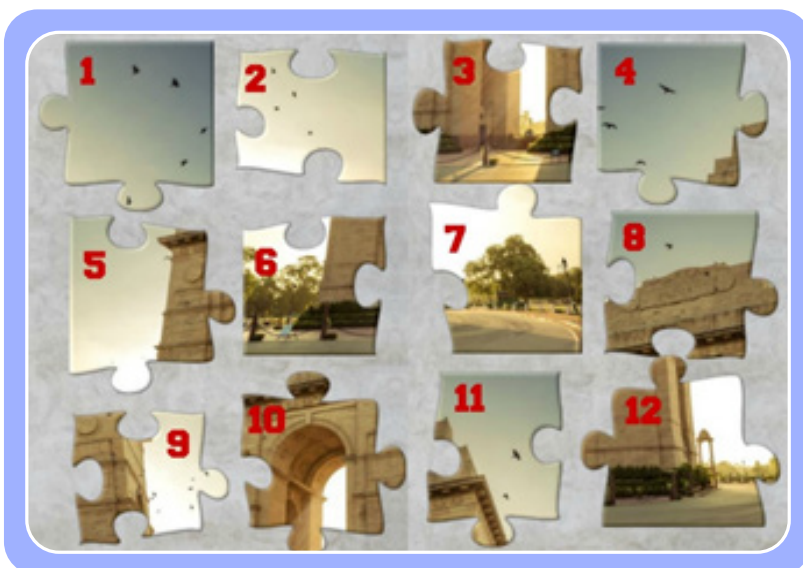
• 15

• 25

• 20

2

Can you fix this war memorial?



Hint: India Gate







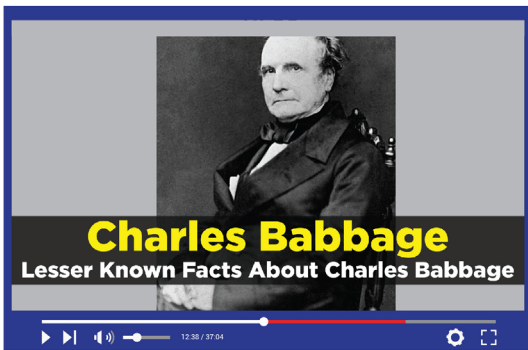
Knowledge Tribe

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ON OUR  
YOUTUBE  
CHANNEL

The Knowledge Tribe YouTube channel is a platform where we host informative and fun videos on a variety of topics. This month, we introduce you to a few of these videos, which you will absolutely love watching!



Click to Watch

Knowledge Tribe shares a few lesser known facts about Charles Babbage. Did you know he developed the very first concept of programmable computers? To know such more interesting things about the 'Father of Computer', watch the video.



Click to Watch

Did you know that 'Night of Radishes' is a festival for making sculptures with radishes? But how did it originate? Where is the festival celebrated? To know all these interesting things about this festival, watch the video.

**Subscribe to the Knowledge Tribe YouTube channel  
and stay tuned for more such interesting videos!**

# YOUR SPACE

## BRAVEHEARTS



Oh, Great soldiers and warriors,  
Guarding the nation's frontiers,  
Putting an end to hatred and terror,  
helping us to live without fear,  
Wearing the uniform and hiding behind the bushes,  
Fulfilling all our worldly wishes.

Sacrificing everything, happiness and grief,  
To safeguard the country from enemies,  
Encouraged by our belief,  
for centuries and centuries.

Living your life in the deserts and mountains,  
while we enjoy our life in parks and fountains.  
You are as clever as a fox,  
And put the enemies on the docks.

In humility we bow down to you,  
With gratitude and love  
Will always repay the debt due unto you.

**Sai Abhinaya Chandrashekhar,**  
Presidency School Bangalore South  
Class 5





Abhinav Kumar  
Hill Top School, Jamshedpur  
Class 5



Are you good at writing?



Have you clicked any  
beautiful photograph?

Have you painted a masterpiece?



**Here is a chance to get recognised !**

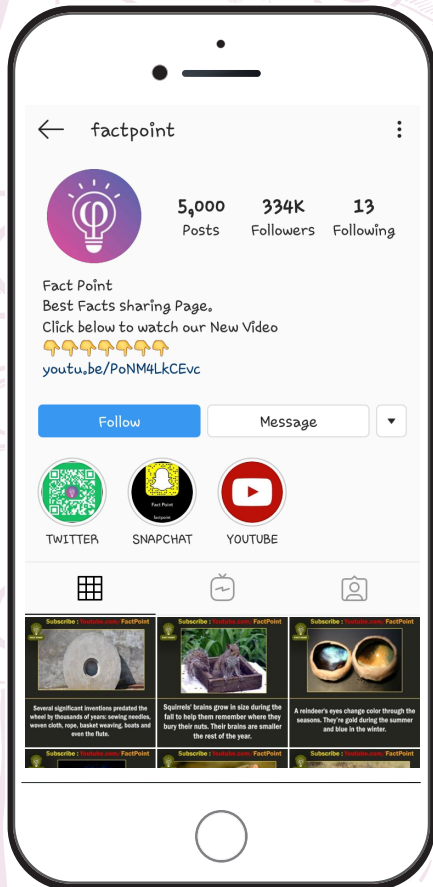


Send us your writings, paintings or any of your wonderful creations to: [neha@knowledgegetribe.in](mailto:neha@knowledgegetribe.in)

And we will publish it in our Knowledge Tribe magazine.



# Our Picks



## Instagram- factpoint

**What it is about:** Amazing facts


**What you would like:** The fact that the makers do not try too hard to make an impression, and let the content speak for itself.

 <https://www.instagram.com/factpoint/>

## YouTube- INSIDER

**What it is about:** Informational and educational channel

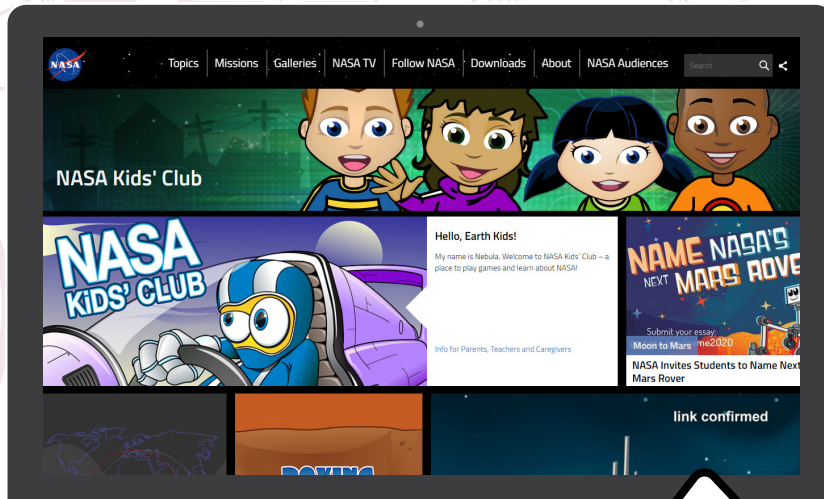
**What you would like:** The vast range of information, starting from food, science, movies to daily activities. The videos are short and entertaining.

 <https://www.youtube.com/channel/UCHJuQZuzapBh-CuhRYxlZrg>



INSIDER is great journalism about what passionate people actually want to know. That's everything from news to food, celebrity to science, politics to sports and all the rest. It's smart. It's fearless. It's fun. We push the boundaries of digital storytelling. Our mission is to inform and inspire.

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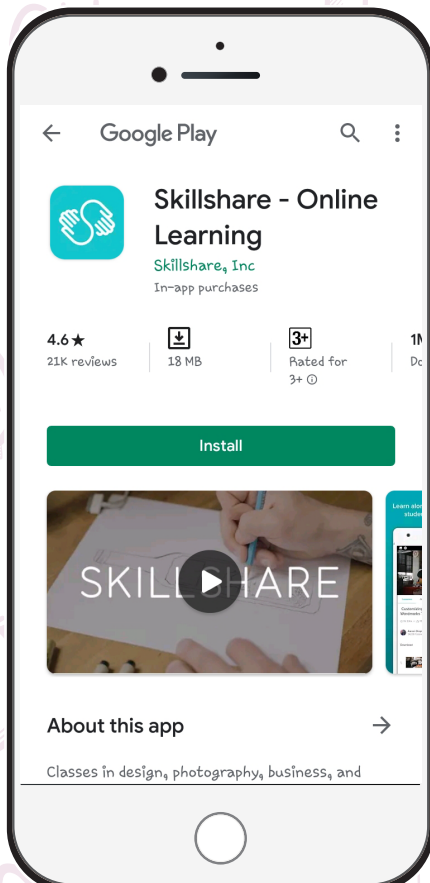
### Website- NASA Kids' Club

**What it is about:** Educational and game-based website.

**What you would like:** How the website animations stimulate the children's desire to know about science and space technology.



<https://www.nasa.gov/kidsclub/index.html>



### App- Skillshare

**What it about:** 'Lifelong learning'

**What you would like:** Classes cannot get more personalised than this.

Available on





# Celebrating INDIA

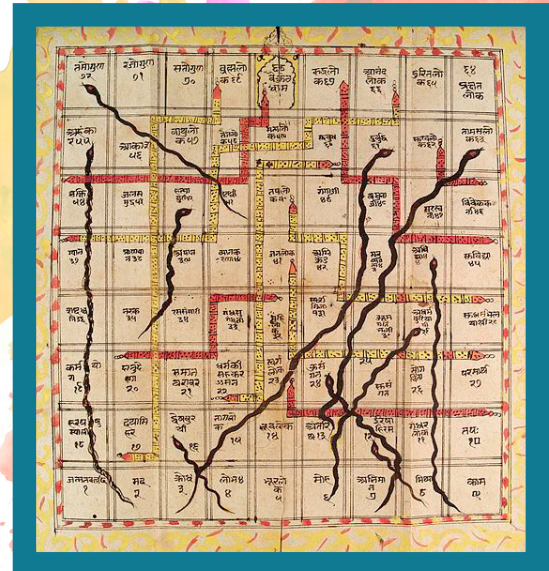
## Mokshapat

Mokshapat, popularly known today as 'Snakes and Ladders', is a popular children's board game. It originated in ancient India and was initially called 'Paramapada Sopanam'. It is believed to have been created by an Indian poet and saint named Gyandev.

Mokshapat was invented to teach children about the effects of good deeds, as opposed to that of bad deeds. The ladders represented virtues such as generosity, faith, humility, etc., and the snakes represented vices such as pride, anger, murder, theft, etc. The moral of the game was that, a person can attain salvation (moksha) through performing good deeds but will be reborn in 'lower forms of life' if they commit sins. The number of ladders was lesser than the number of snakes, as a reminder that the path of good is quite difficult when compared to the path of evil. The 100th square represented 'nirvana' or 'moksha' - freedom from earthly life.

## Playing the Game

It is played between two or more players, by rolling a die. The game board has a grid with numbered squares. Certain squares on the grid are connected by ladders, and other squares are connected by snakes. On the way to the finishing point, players meet hurdles in the form of snakes. They also meet opportunities in the form of ladders. Whenever the player encounters a snake's head, they will be thrown back to an earlier square, which is at the snake's tail. On the other hand, whenever the player encounters the bottom of a ladder, they can climb it to reach a higher square. The player who reaches the finishing point first, wins the game.



## Bonus Facts:

The name 'Snakes and Ladders' was given to this game by the British, when they took it from India to Europe. The game is known as 'Chutes and Ladders' in the USA.





In the next  
issue of the  
**Knowledge Tribe**  
**EMagazine...**

**World's  
Youngest Tabla  
Performer**

**Guinness Book of  
World Records**

**Truptraj  
Pandya**