

Grade 3

AI for JUNIORS

FathomKey

AI Series

Future -
Ready kids



Think
Smart
Build
Better

A Fun, Friendly Introduction to AI

NEP 2020 • NCF-SE 2023 • CT & AI Competency Aligned



Young
Problem Solver

I solve problems
step by step.



Technology
Explorer

I explore technology
and use it wisely



Responsible Digital
Citizen

I use technology
safely and kindly

Authored by alumni of IIM Bangalore and University of Texas

F fathomKey

AI for Junior – Grade 3

First Edition: 2026

Copyright © 2026 Fathomkey

All rights reserved.

No part of this publication may be reproduced, stored in a retrieval system, transmitted or distributed in any form or by any means—electronic, mechanical, photocopying, recording or otherwise—without the prior written permission of the publisher.

Published by: Fathomkey

Website: www.fathomkey.in

Email: info@fathomkey.in

Written by: Nadia Afreen

Editorial Support: Fathomkey Academic Team

Designed and Illustrated by: Nadeemur R. Choudhary

ISBN: 978-81-180798-0-4

Printed in India by:

Curriculum Alignment

This book is part of a grade-wise AI learning programme developed for Indian schools. Its content is informed by the principles of **NEP 2020**, **NCF** and relevant **CTAI** guidance. It supports the development of computational thinking, problem-solving, digital literacy, creativity and responsible use of Artificial Intelligence across school curricula.

LMS Support

This book is supported by the FATHOMKEY Learning Management System (LMS), which provides digital learning resources, interactive activities, assessments and additional support for students and teachers. LMS access is available through registered schools. For access and assistance, visit <https://lms.fathomkey.in> or contact info@fathomkey.in

Disclaimer

This book is intended for educational purposes. AI technologies, digital tools, interfaces and features may change over time. Teachers and students should verify important AI-generated information using reliable sources and follow appropriate privacy and online-safety practices. All examples, names, datasets and situations used in this book are fictional or included solely for learning. Product names, logos and trademarks mentioned in the book belong to their respective owners. Their inclusion does not imply endorsement, sponsorship or affiliation.

FATHOMKEY

AI for everyone.

AI for JUNIORS

Grade 3

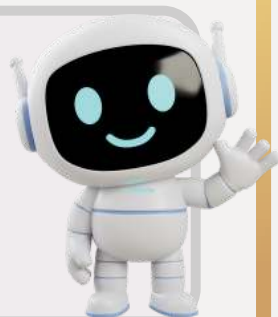
A Fun, Friendly Introduction to AI

Name:

Class: Sec:

Subject: Roll No:

School:



CT & AI STUDENT BOOK

FfathomKey

Authored by alumni of IIM Bangalore and University of Texas

A Board-Neutral Learning Resource for Indian Schools

PREFACE

Children are naturally curious. They observe the world, ask questions, notice patterns and find creative ways to solve problems. **AI for JUNIORS – Grade 3** builds upon this curiosity and introduces young learners to the basic ideas of Computational Thinking and Artificial Intelligence in a simple and engaging manner.

The book encourages students to think carefully, break problems into smaller parts, recognise patterns and arrange instructions in the correct order. Through familiar examples, colourful illustrations, puzzles, classroom activities and guided projects, children discover how people use technology to complete different tasks.

Artificial Intelligence is introduced as a useful technology that can recognise patterns, work with information and support people. At the same time, students learn that AI is not a person or a magical machine. It can make mistakes and its answers must be checked by people.

Special attention has been given to safe and responsible technology use. Children are encouraged to protect their personal information, ask a trusted adult for guidance, communicate kindly and use AI only as a learning aid. The activities promote observation, reasoning, creativity, collaboration and responsible decision-making. Teachers and parents play an important role in this learning journey. Their guidance will help children discuss ideas, complete activities safely and connect classroom concepts with everyday experiences.

We hope this book inspires every child to become a curious learner, a thoughtful problem-solver and a responsible user of technology.

Observe. Think. Create. Stay Safe.

Inside the Series

@ What You Will Learn

The section tells you what you will learn in the chapters and the skills you will develop.

🎨 Activity Corner

Enjoy hands-on activities, drawing, puzzles and mini projects to reinforce your learning.

💡 Byte's Smart Tip

Byte shares smart tips to help you to solve problems using Computational Thinking.

🌱 Real-Life Connection

Discover how Computational Thinking helps us to solve problems in our daily lives.

📖 Let's Begin with a Story

Every chapter begins with an interesting story that connects the lesson to everyday life.

📘 Definition

Learn important words and their meaning in simple and easy language.

★ Did You Know?

Read amazing facts that make learning more interesting and fun.

🤖 AI Connection

Explore how Artificial Intelligence and smart machines use instructions to complete tasks.

💬 Think About It

Answer thought-provoking questions that encourage observation, reasoning and discussion.

✍️ Exercise Time

Practice what you have learned through fun and engaging questions.

🏆 Challenge Yourself

Apply your learning through HOTS, analytical thinking and real-life problem-solving activities.

📚 Let's Revise

Quickly revise the chapter using a summary, glossary and a simple mind map.

CONTENTS

Unit 1 - Welcome to Computational Thinking.	page no
Chapter 1 - Thinking Like a Problem Solver	3
Chapter 2 - Technology Around Us	10
Unit 2 - Patterns and Smart Thinking	
Chapter 3 - Finding Patterns	18
Chapter 4 - Instructions, Algorithms and AI	25
Unit 3 - Breaking Problems into Parts	
Chapter 5 - Solving Big Problems	32
Unit 4 - Introduction to Artificial Intelligence	
Chapter 6 - AI Around Me	39
Unit 5 - Digital Responsibility	
Chapter 7 - Safe and Responsible Technology Use	46
Unit 6 - My Final Explorer Project	
Chapter 8 - Design My Smart Classroom	53

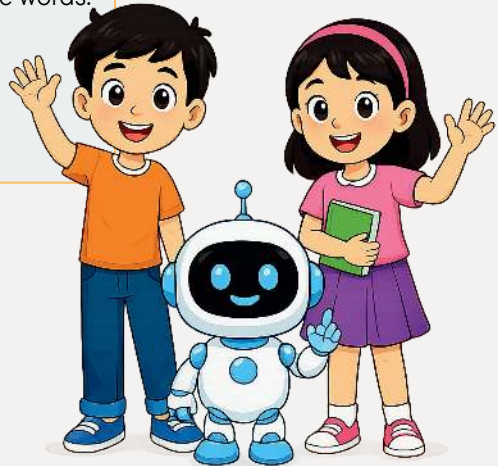
Welcome to Computational Thinking.

Thinking like a *problem solver*

Learning Outcomes

After completing this chapter, you will be able to:

- ✓ Understand what a problem is.
- ✓ Explain Computational Thinking in simple words.
- ✓ Break a big problem into smaller parts.
- ✓ Solve problems step by step.
- ✓ Use smart thinking in everyday life.



Chapter Introduction

Every day, we solve many small problems.

We pack our school bag, complete puzzles, arrange our toys and find our missing things.

Sometimes these tasks seem difficult at first. But when we think carefully and solve them one step at a time, they become much easier.

In this chapter, you will discover how smart thinkers solve problems. You will also learn that computers and AI systems work best when people give them clear instructions.



★ Every great invention begins with a simple question.

Let's Begin with a Story

Aarav and Anaya received a big jigsaw puzzle as a gift. There were puzzle pieces scattered all over the table. "Oh no! There are so many pieces," said Aarav.

"This looks too difficult." Anaya smiled and said, "Let's not try to do everything at once."

Byte, the friendly AI robot, nodded and said, "Big problems become easy when we break them into smaller parts."

First, they sorted the puzzle pieces by colour. Next, they found all the corner pieces and joined them together.

Then, they connected the edge pieces. Finally, they filled in the middle part of the puzzle.

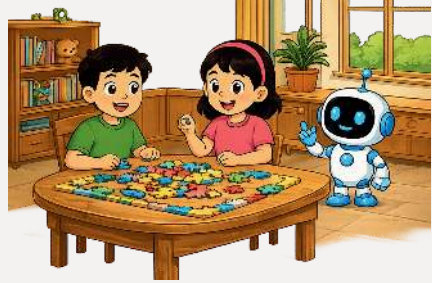
Soon, the beautiful picture was complete! Aarav clapped happily.

"Breaking a big problem into small parts really worked!"

Byte smiled and said, "That is called smart thinking. When we solve one small part at a time, even the biggest problems become easy."

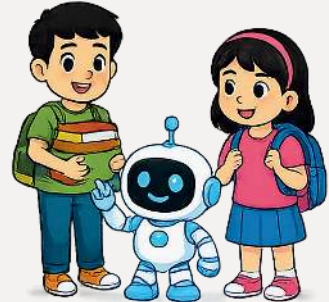
Aarav first picked up his books.
Then he packed his school bag.
Next, he folded his clothes.
Finally, he wore his shoes.
Soon, everything was ready. "Wow!" Aarav smiled.
"Making a plan really helped me" Anaya replied,

"That's called smart thinking!"



Byte's Smart Tip

Big problems become easy when we divide them into smaller steps.



Think About It

Have you ever had many things to do at the same time? What did you do first? Discuss your answer with your classmates.

What Is a Problem?

Every day, we face different situations that need a solution.

Maybe you cannot find your pencil.

Maybe your puzzle is not complete.

Maybe your school bag is untidy.

These are all problems.



Solution: The answer or way to solve a problem..

Problem: A situation or challenge that needs a solution.



What Is a Solution?

When we find a way to solve a problem, we have found a solution.

Example

Problem: Your water bottle is missing.

Solution: Look in your classroom, school bag and playground one by one.

What Is Computational Thinking?

When we solve problems by thinking carefully and following simple steps, we use Computational Thinking.

Computational Thinking helps us to think clearly before we act.

It does not mean only using a computer.

It is a smart way of solving problems.

Computational Thinking: The smart way of solving problems by breaking them into smaller steps and thinking carefully.



AI Connection

Computers and robots cannot think like humans.

They follow instructions given by people.

That is why clear thinking and good planning are important.



Thinking Skills HOTS!!

1. Why is planning better than doing everything at once?
2. Can two people solve the same problem in different ways? Explain.



Observation Activity

Look around your classroom. and Write down: One well-organized place. One place that can be improved.

★ Did You Know?

Even a robot vacuum cleaner follows a plan to clean your house.
It moves step by step to cover every corner.



Quick Check

Fill in the blanks.

1. A _____ is something that needs a solution.
2. Computational Thinking helps us to solve _____.

Four Smart Thinking Skills

Computational Thinking uses four important skills.

1. Break It Down

Sometimes a problem is too big.

Instead of solving everything together, divide it into smaller tasks.

Example: Cleaning your room

Step 1: Pick up the toys and keep in the box.

Step 2: Arrange books on the rack.

Step 3: Fold clothes and keep in the shelves .

Step 4: Throw away waste paper.



Analytical Thinking

Which is easier—cleaning one shelf at a time or cleaning the whole room together?

What may happen if you forget one important step while getting ready for school?

2. Find Patterns

Look at the balls carefully.

Do you notice anything that repeats?

Example:



The colours repeat in the same order.

Patterns help us to make **predictions**.

3. Focus on Important Information

Sometimes not everything is important.

We should pay attention only to the information that helps us to solve the problem.

Example:

If you are looking for your pencil box, you do not need to search inside the wardrobe!

Important place to search is in your school bag.



Pattern:: Something that repeats in the same way.

4. Follow Steps in order

Many tasks become easier when we follow steps in the correct order.

Example: Making Lemonade

Take a glass, add water. add lemon juice, add sugar

Mix well and the lemonade is ready !!





Revision Summary

- ✓ A problem is a situation that needs a solution.
- ✓ A solution is a way to solve a problem.
- ✓ Computational Thinking helps us to solve problems in a smart and organized way.
- ✓ Big problems become easier when we divide them into smaller parts.
- ✓ Finding patterns helps us to make predictions.
- ✓ Following steps in the correct order helps us to complete tasks successfully.
- ✓ Good planning saves time and effort.



"Glossary"

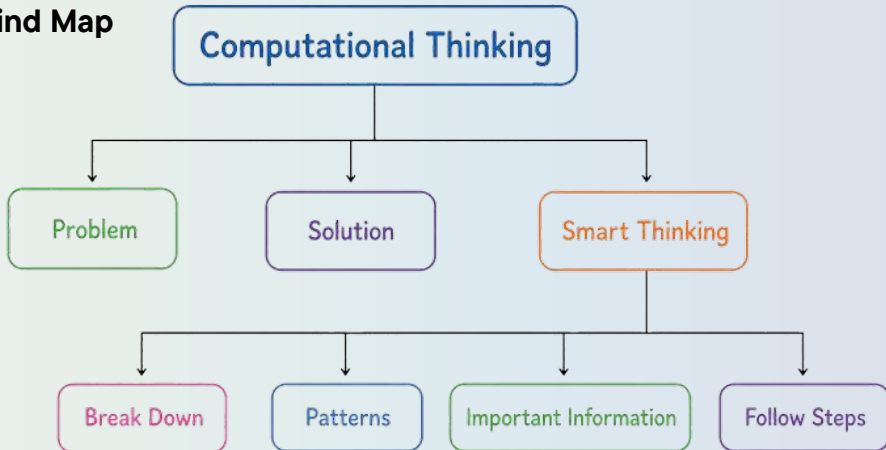
Problem: A situation or challenge that needs a solution.

Solution: A way to solve a problem.

Computational Thinking: A smart way of solving problems step by step.

Pattern: Something that repeats in the same way.

Mind Map



Exercise Time

A. Fill in the Blanks

1. A _____ is something that needs a solution.
2. Computational Thinking helps us to think _____.
3. A _____ repeats in the same way.
4. A _____ is one action in a task.
5. A _____ is a way to solve a problem.

B. True or False

1. Every problem has only one solution. ()
2. Planning makes work easier. ()
3. Computational Thinking means only using a computer. ()
4. Patterns repeat. ()
5. Breaking a big task into smaller tasks makes it easier. ()

C. Match the Following

Column A	Column B
1. problem	a. solves a problem
2. solution	b. repeats
3. pattern	c. list of steps
4. Plan	d. one action
5. Step	e. need a solution

D. Multiple Choice Questions

1. Which of these is a problem?
a) Reading a story b) Losing your pencil c.) Playing football d) Singing a song
2. Which skill helps us to notice repeating things?
a) Pattern Recognition b) Dancing c) Painting d) Running
3. Which is the correct first step while cleaning your room?
a) Throw books b) Pick up toys c) Sleep d) Eat food
4. Computational Thinking helps us to _____.
a) Make problems bigger b) Solve problems step by step
c) Forget important things d) Waste time

E. Short Answer Questions

- Q1. What is a problem?
- Q2. What is a solution?
- Q3. What is Computational Thinking?
- Q4. Why is it helpful to make a plan before starting work?
- Q5. Give one example of a pattern from your daily life.

F. Long Answer Questions

1. Aarav's room was untidy. Explain how he solved the problem step by step.
2. Imagine your school bag is messy. Write five simple steps you will follow to organize it.
3. Explain how Computational Thinking can help you to complete your homework on time.

Subject Enrichment / Activity Corner

Computational thinking

Activity 1: Observe and Identify ∞

Look around your classroom or home.

Write five things that require us to think step by step.

Object

Ex: Brushing Teeth

What steps do we follow?

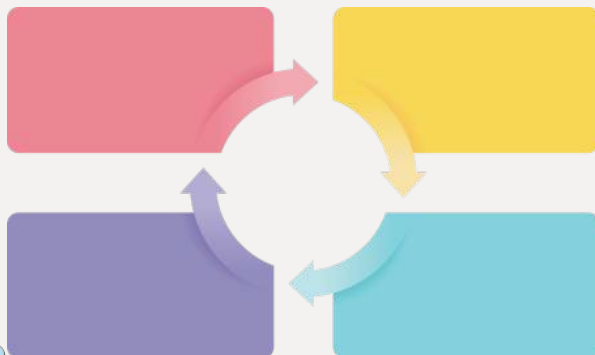
Ex: Put toothpaste → Brush → Rinse

Activity 2: Break It Down ✂

Choose one daily activity.

- ☐ Packing your school bag
- ☐ Making a sandwich
- ☐ Watering plants
- ☐ Wearing school uniform

Write the steps in order.



Activity 3: Find the Pattern 🔍

1. ★ ★ ★ ▲ ★ ★ ★ ▲ ★ ★ ★ _____.
2. □ ○ □ ○ □ ○ _____.
3. 🚗 🚲 🚗 🚲 🚗 _____.

Activity 4: Group Challenge 👥

Work in groups.

Choose one classroom activity like:

- Arranging books
- Watering plants
- Distributing notebooks
- Cleaning the board

Activity 5: Follow the Algorithm 🛒

Draw arrows to reach the school.

