

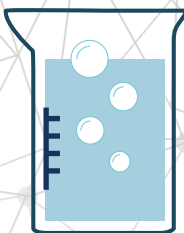
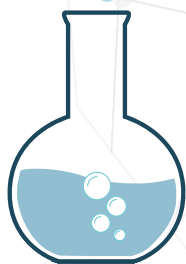
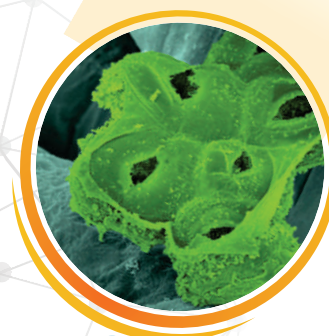
Insight into **SCIENCE**

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Revised
Edition

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Radical Books®



Radical Books® Pvt. Ltd.

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First Edition: 2016

Revised Edition: 2017

ISBN: 978-93-84458-21-8

Printed in India at:

Swan Press, Delhi

Preface

Insight into SCIENCE is a series of science books for classes kindergarten to V, specially designed to lead young minds to explore the world of science and to bring to an end the teacher's perennial search for the ideally graded science books that develop a scientific aptitude in young learners. The books are designed for schools teaching a specialised science course at the primary level.

Science is a subject that appeals greatly to young minds and becomes most interesting for both the learner and the teacher if taught using an interactive and innovative method. The books in the series equip the teacher with innovative techniques and explain the concepts of science in a most interesting, learner-friendly manner, using very lucid language. The books focus on students' understanding the concepts and discourage rote learning. For this, scientific principles have been correlated with children's everyday experiences.

Some key features of the **Insight into SCIENCE** series:

- ☀ The approach adopted is innovative and emphasises learning actively by investigating, observing and experimenting.
- ☀ The text is supported by rich, self-explanatory illustrations to aid learning.
- ☀ *Naughty Nitoo* comic stories arouse students' interest in the topic to be taught.
- ☀ *What you already know*, at the beginning of each chapter, activates students' background knowledge and relates it to the topic, which arouses students' interest in the topic and helps them to understand it easily.
- ☀ *What you will know* has topic-based questions that usually arise in young children's minds. It encourages students to explore the subject to find the answers to their questions, while also setting learning objectives.
- ☀ *Fun and learn* has interesting experiments and activities to consolidate learning.
- ☀ *Know a fact* provides extra information related to the topic, which motivates students to further explore the subject in particular and the world of science in general.
- ☀ *Words to remember* provides explanations of all the important words that may be new for students.
- ☀ *Points to recall* sums up the chapter perfectly, facilitating revision.
- ☀ *Exercises* are comprehensive and include a wide variety of questions for testing all types of students: not so intelligent, average and extraordinarily intelligent.
- ☀ *Tell your teacher* inculcates moral values in students and develops their communication skills.
- ☀ *Find out* asks students questions about daily life situations involving the application of the scientific principle taught in the chapter. It encourages students to explore the scientific world on their own.
- ☀ *Project*, provided in each chapter, gives students an interesting task in the application of the theory or principle taught and aims at making them scientifically creative.
- ☀ *Experiment* or *Activity time*, at the end of the chapter, aims at making students scientifically innovative with the help of an activity using easily available resources.

We sincerely hope that with all these valuable qualities, the books in the series will not only impart scientific knowledge but also develop a scientific aptitude in children and lead them to apply scientific principles for a better and brighter future of humanity.

—Publisher

Highlights



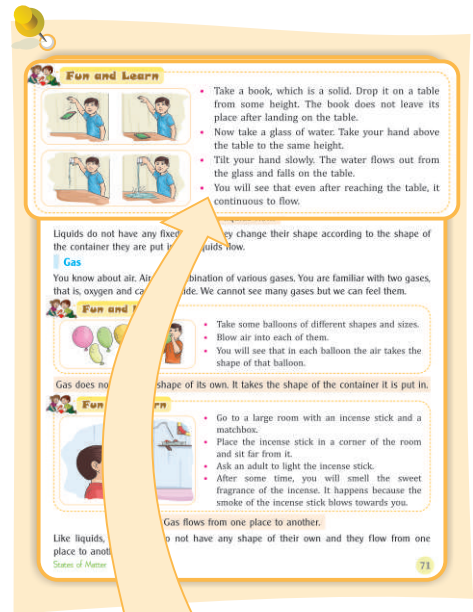
Naughty Nitoo

comic stories describe everyday activities of a typically curious and naughty child to arouse students' curiosity and make them eager to learn.



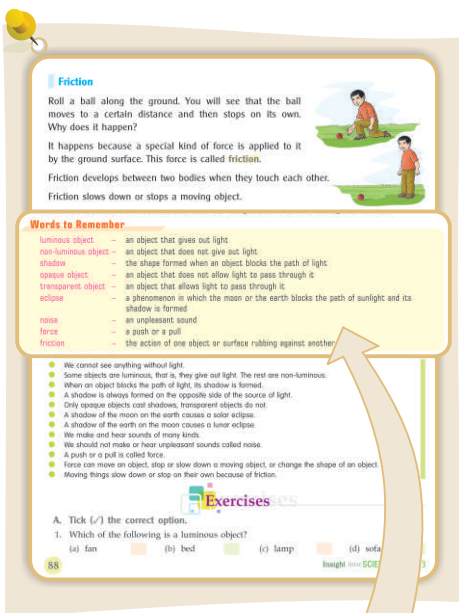
Before We Start, Let's Check

activates students prior knowledge related to the topic to be taught and makes every student active in class.



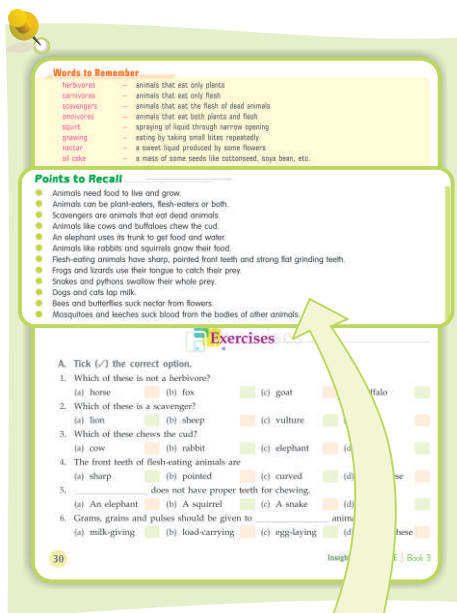
Fun and Learn

has novel activities and experiments within the text that help to consolidate learning.



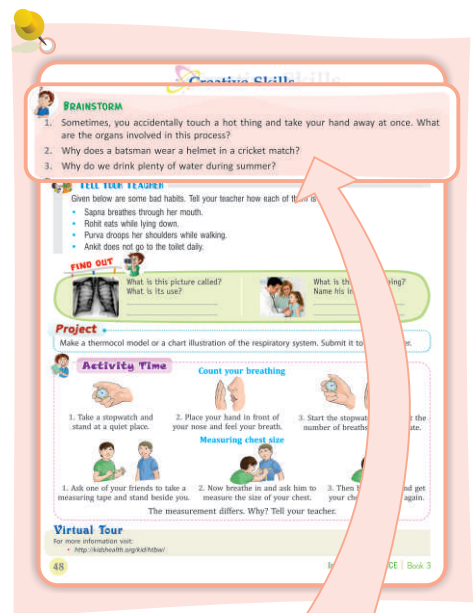
Words to Remember

provides explanations of all the important words used in the chapter and does away with students' need for a dictionary.



Points to Recall

sums up the chapter perfectly, facilitating revision and the consolidation of learning.



Brainstorm

has questions to answer which students have to use their thinking skills and think out of the box.

TELL YOUR TEACHER
Look at the pictures. Tell your teacher what good or bad thing the child in each picture is doing.

FIND OUT
Look at the following picture of a plant. It grows at such places where it cannot make enough food for itself. So, it eats insects. It has parts like a trap. Find out the name of the plant. It closes the trap at once. Then, it eats the prey.

Project
Take a sheet of chart paper. Draw a large circle on it side by side. Write 'Living Things' below one circle and 'Non-living Things' below the other. Collect pictures of ten living things and ten non-living things. Paste them on their respective circles. Give your chart the title 'Living and Non-living Things'.

Experiment
Take a potted plant. Now take a large cardboard box. Make a big hole in the box. Cover the plant upside down. Water the plant daily. After a few days, you will see the plant grows towards light.

Virtual Tour
For more information visit:
• <http://www.ten.co.uk/teaching-resources>
• <http://www.youtube.com/watch?v=...>

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Tell Your Teacher

inculcates moral values in young children and develops their communication skills.

TELL YOUR TEACHER
Read the following activities. Tell your teacher what right or wrong thing each child has done.

FIND OUT
Here is a clock used in ancient times. Find out its name and how it was used. It is a special kind of balance. You can see such a balance in a laboratory, a jeweller's shop, etc. Find out its name and use.

Activity Time
Things you need: a hanger with notches, two paper cups, two strings of equal length, a punching machine (single hole).
Steps:
1. Take the cups and make two holes in each cup on opposite sides about an inch below the rim.
2. Now pass string through in one of the cups.
3. Tie a knot on the string end to keep it from sliding out of the hole.
4. Put the other end of the string through the second hole in the cup. Tie another knot.
5. Repeat this with the other cup and string.
6. Hang the hanger on a hook on a wall.
7. Level the cups over the top of the hanger so the strings hang straight down.
If the cups over the top of the hanger are in the notches, the balance is ready!

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Find Out

asks students questions about some additional daily life situations, which encourages students to explore the world of science on their own.

FIND OUT
On a chilly morning, why does it seem as if steam is coming out of our mouths when we breathe out? The rainiest place in the world is in India. Find its name and the name of the state where it is located.

Project
Make a 'weather bulletin' for one week. Take a sheet of chart paper and make a table on it as shown below.

Day and date	Max. Temp.	Min. Temp.	Time of Sunrise	Time of Sunset

Now read the weather column in a newspaper daily. Fill in the table with the information given in the column. After seven days, when the table is complete, submit it to your teacher.

What you need: two square pieces of card, one string, a cup, a pencil with an eraser, a pair of scissors, a marker.

Steps:
1. Take the string and tie it in its ends.
2. Cut out two triangles from one of the cards and insert them into the slots as shown.
3. Stick the pins over the pencil.
4. Fit the pencil in the bottom of the paper cup. Then fit the cup rim to the other card with glue.
5. Now write 'N', 'E', 'S' or 'W' for North, East, South and West.
6. Take the wind vane outside and find out which way the wind is blowing.

Virtual Tour
For more information visit:
• <http://www.bbc.co.uk/1/ontools>

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Project

gives students an interesting task in the application of the theory or principle taught in the chapter and aims at making students scientifically creative.

Activity Time

Take a broad and deep tray and fill it with soil. Now write your name on a sheet of chart paper as shown. Cut out your name. Place the paper on the tray. Sow some mustard seeds in the soil that lies below your name. Remove the paper. Put the tray in an open place. Keep watering it regularly. After some days, you will see your name written with small plants.

Join the dots from 1 to 25 and see what you get.

Virtual Tour
For more information visit:
• <http://www.brainiac.com/education/community/tp-principles>
• <http://www.getwriting.org/grammar>

Parts of a Plant

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Activity Time

has an interesting experiment to help students to learn practically. It can be conducted using easily available resources.

Revision Exercise 1
(Based on chapters 1 to 7)

A. Tick (✓) the correct answer.

- Which of these are not scavengers?
(a) lion (b) sheep (c) vulture (d) tiger
- Which of these is often used by a soldier?
(a) tent (b) houseboat (c) igloo (d) caravan
- Which of these animals chews the cud?
(a) elephant (b) rabbit (c) cow (d) dog
- Which of these is the fastest growing plant?
(a) bamboo (b) banyan (c) sunflower (d) eucalyptus
- The stomach of a cow is divided into four parts.
(a) stomach (b) stomach (c) kidneys (d) lungs
- Which of these plants has a taproot?
(a) mustard (b) onion (c) wheat (d) wheat
- Which of these is an injury?
(a) burn (b) bruise (c) bruise (d) all of these
- Which of these uses its beak to climb a tree?
(a) parrot (b) parrot (c) sparrow (d) vulture

B. Write 'T' for true statements and 'F' for false ones.

- Trees have roots which are above the ground.
- Birds have webbed feet.
- A plant's root system protects our internal organs.
- Plants show any kind of movement.
- Plants depend on plants for food.

C. Fill in the blank with the right word.

- Plants in the hills build houses with _____ (flat / sloping) roofs.
- Plants grow away from _____ (pollen / movement).
- Moisture is carried through their _____ (cells / veins).
- A plant's _____ (stomata / leaves) on its leaves.
- Grasses have _____ (weak-growing / hard-carrying) pulses should be given to.

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Revision Exercises

test students' knowledge of the topics taught. Every aspect of the subjects taught is covered.

Activity Bank
(Based on chapters 1 to 4)

Project
Take a sheet of chart paper. Write 'Parts of a Plant' on the top. Now draw a plant having a stem, roots, branches, leaves, buds, and fruits. Label each part with a colour pen. Write your name and class at the bottom of the chart and submit it to your teacher.

Find Out
Taking help from books, magazines, newspapers, the Internet, etc., find out the following plant champions.
• The tallest tree in the world
• The plant with the largest fruit
• The plant with the largest leaf
• The plant with the largest root

Group Discussion
Make groups of four students each. Each group will discuss the following topic: 'Domestic Animals: uses and care'. Make sure that each student of the group speaks on the topic.

Word Search
In the wordsearch, the names of fourteen birds are hidden. Find and encircle them.

Experiment
Make your own flying bird using a sheet of paper.

Steps:
1. Start with the white side of the paper. Fold it in half.
2. Fold it in half again, make a crease and open.
3. Now fold the top side down past the base line.
4. Fold the wings back upwards so they sit horizontally.
5. Retate the model.
6. Fold down the top flap along this line. Then do the same with the flap behind.
7. Now fold the wings back upwards so they sit horizontally.

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Activity Bank

has a myriad of activities aimed at developing students' scientific creativity and inventiveness.

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