

PLAYBOX

INFORMATION & COMMUNICATIONS TECHNOLOGY STANDARD

4



GOVERNMENT OF KERALA
GENERAL EDUCATION DEPARTMENT

State Council of Educational Research and Training (SCERT), Keralam
2025

NATIONAL ANTHEM

Jana-gana-mana adhinayaka jaya he
Bharatha-bhagya-vidhata,
Punjab-Sindh-Gujarat-Maratha
Dravida-Utkala-Banga
Vindhya-Himachala-Yamuna-Ganga
Uchchala-Jaladhi-taranga
Tava subha name jage,
Tava subha asisa mage,
Gahe tava jaya gatha.
Jana-gana-mangala-dayaka jaya he
Bharatha-bhagya-vidhata,
Jaya he, jaya he, jaya he,
Jaya jaya jaya jaya he!

PLEDGE

India is my country. All Indians are my brothers and sisters.

I love my country, and I am proud of its rich and varied heritage.
I shall always strive to be worthy of it.

I shall give my parents, teachers and all elders respect, and treat everyone with courtesy.

To my country and my people, I pledge my devotion. In their well-being and prosperity alone lies my happiness

Prepared by :

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Poojappura, Thiruvananthapuram - 695012, Kerala

For **State Council of Educational Research and Training (SCERT)**

Poojappura, Thiruvananthapuram - 695012, Kerala

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Dear friends,

You have explored many specialties of your friend, the computer, in your previous classes.

Along with play, this book introduces various in-depth activities using computers.

It includes activities for learning maths and languages, as well as creating songs and rhythms.

Additionally, this book helps you understand how to communicate with your friend, the computer.

Besides this, you should also observe the sights around you directly and compare them with your observations.

With best regards,

Dr. Jayaprakash R.K.

Director
SCERT, Keralam

INFORMATION AND COMMUNICATION TECHNOLOGY-IV

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THE CONSTITUTION OF INDIA

PREAMBLE

WE, THE PEOPLE OF INDIA, having solemnly resolved to constitute India into a ¹**[SOVEREIGN SOCIALIST SECULAR DEMOCRATIC REPUBLIC]** and to secure to all its citizens :

JUSTICE, social, economic and political;

LIBERTY of thought, expression, belief, faith and worship;

EQUALITY of status and of opportunity; and to promote among them all

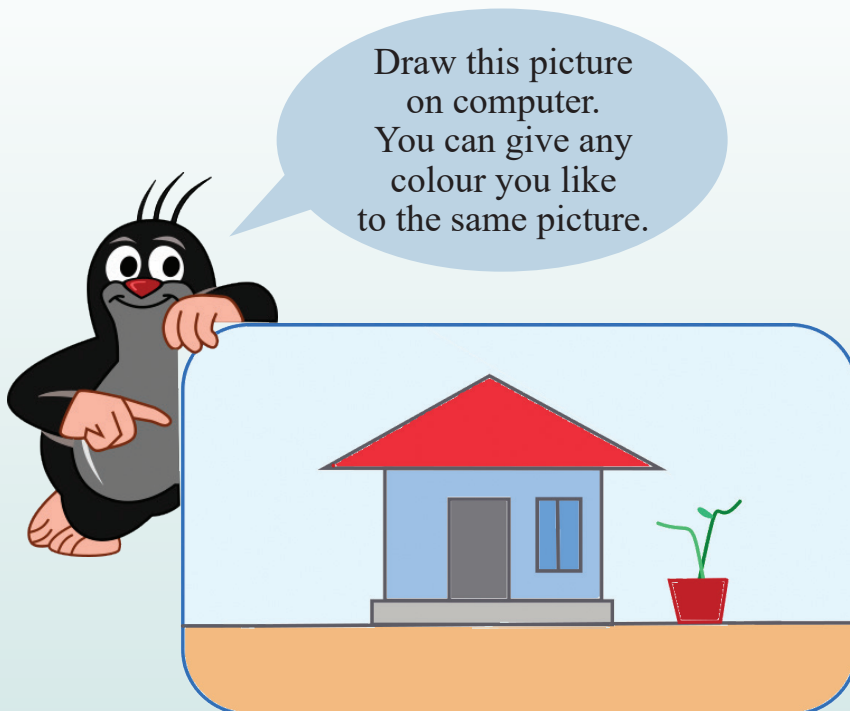
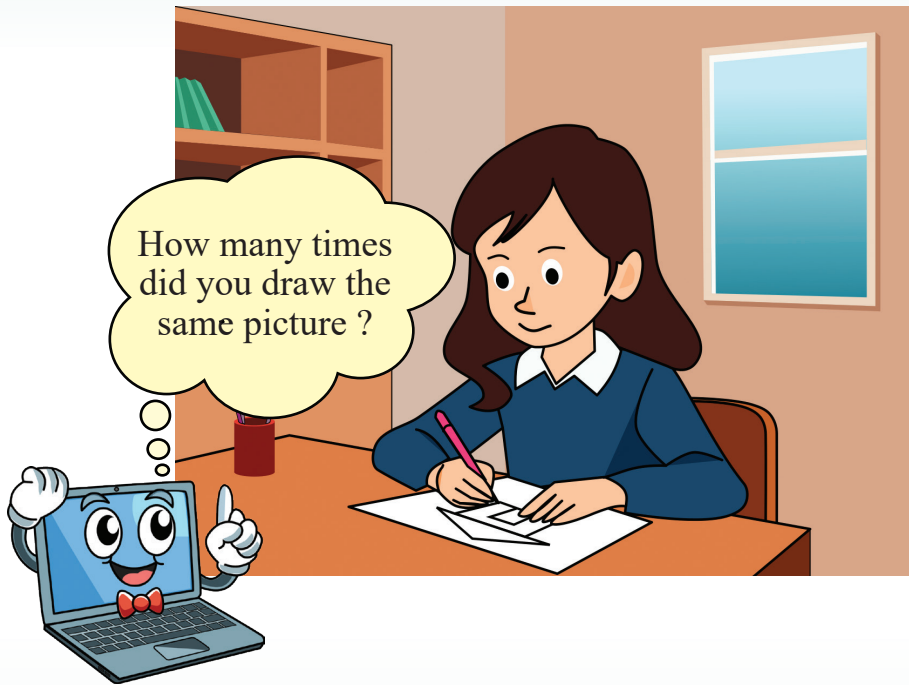
FRATERNITY assuring the dignity of the individual and the ²[unity and integrity of the Nation];

IN OUR CONSTITUENT ASSEMBLY this twenty-sixth day of November, 1949 do **HEREBY ADOPT, ENACT AND GIVE TO OURSELVES THIS CONSTITUTION.**

1. Subs. by the Constitution (Forty-second Amendment) Act, 1976, Sec.2, for "Sovereign Democratic Republic" (w.e.f. 3.1.1977)
2. Subs. by the Constitution (Forty-second Amendment) Act, 1976, Sec.2, for "Unity of the Nation" (w.e.f. 3.1.1977)

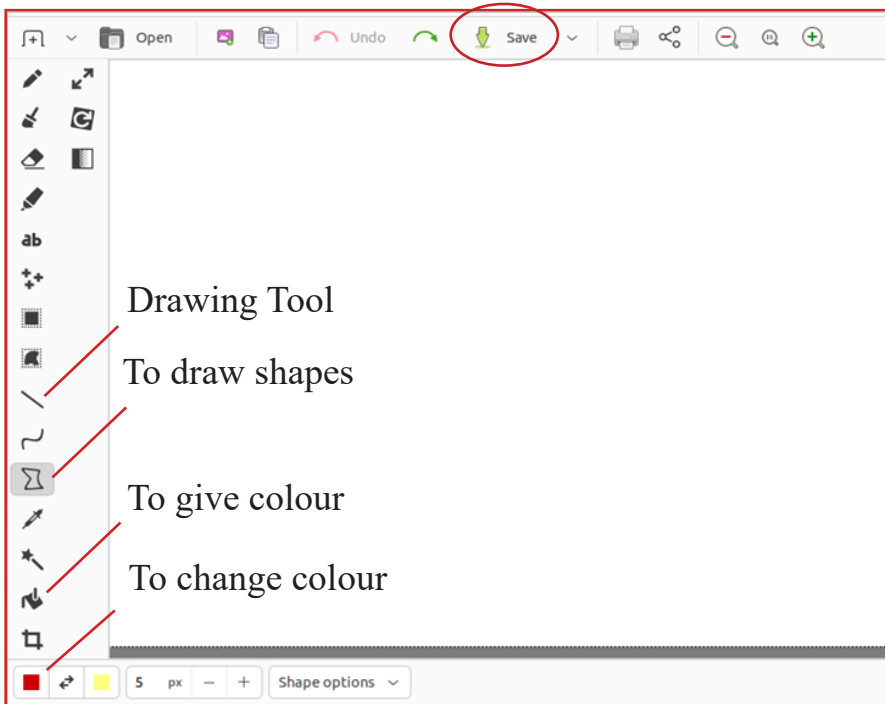
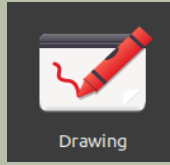
Chapter 1

Let's Draw a Picture

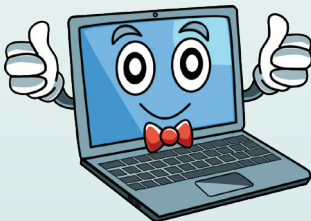


To the Activity

Drawing



Now draw as many pictures as you like.



To save the picture on Computer, click **Save**.



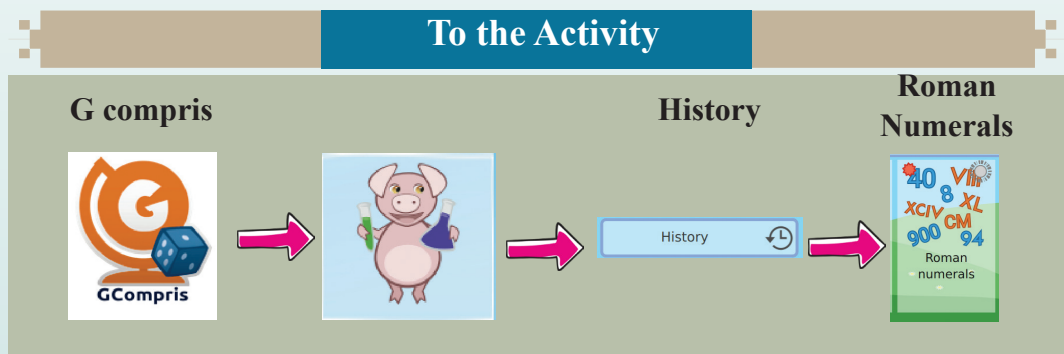
Chapter 2

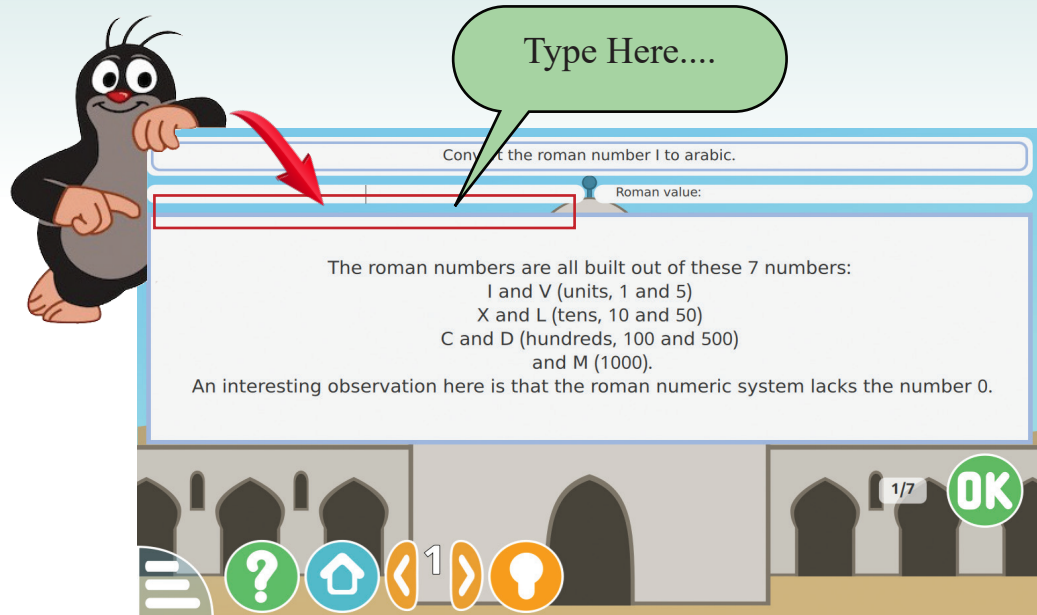
Roman Numerals



To know more about Roman Numbers start playing the game
Roman Numerals in G Compris.

To the Activity



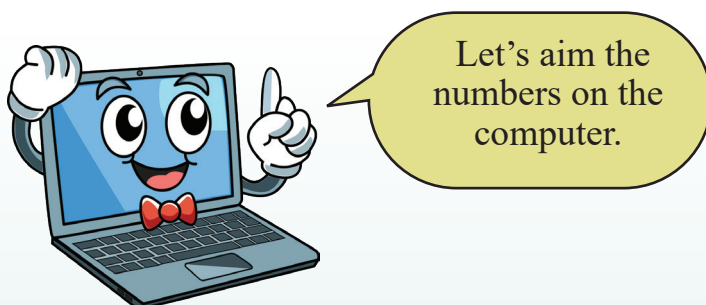


Complete all the Levels.



Chapter 3

Aim the Target, Learn Multiplication



To the Activity

Tux Math



Play Alone



Math Command Training Academy



Multiples of 3



Using keyboard type the products of the numbers falling down



Let's see the fireworks?



Chapter 4

Cross the Canal

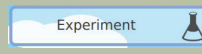


To the Activity

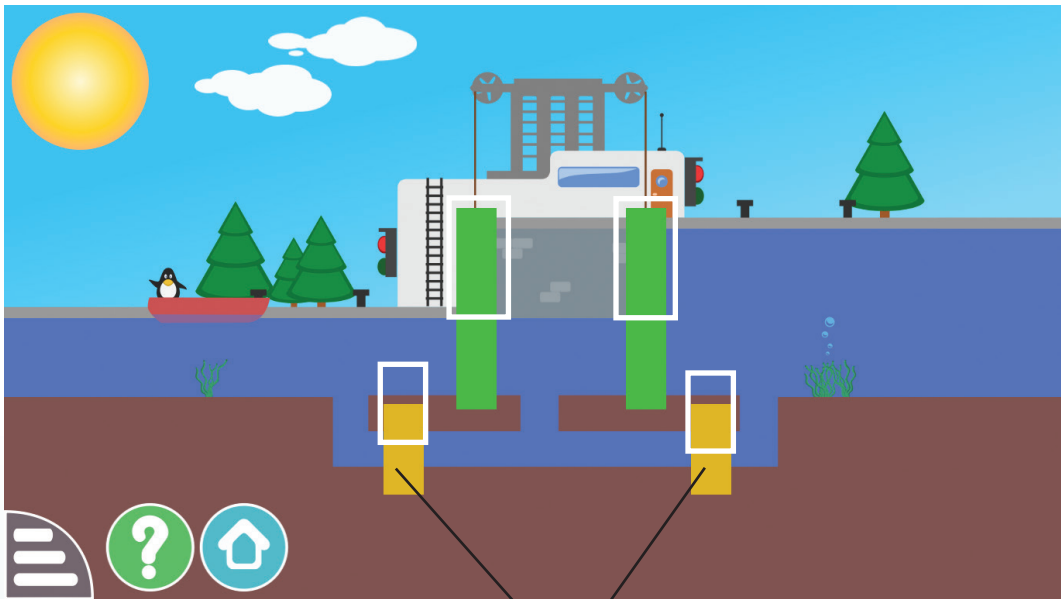
Gcompris



Experiment



Operate a Canal Lock



To make the water level equal, open these locks

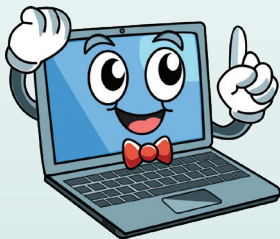
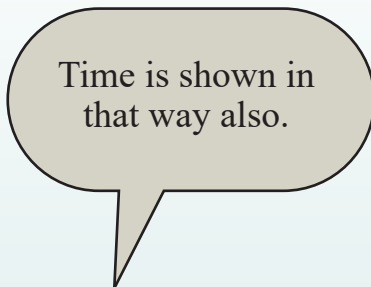
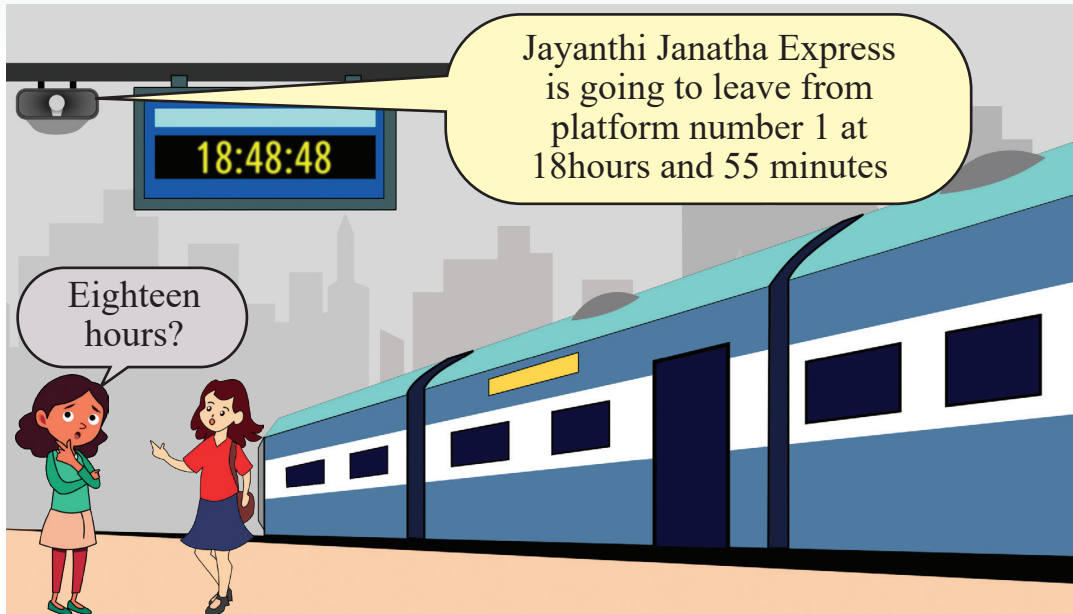


Open the locks in the right order so that Tux can move the boat to both sides of the canal .



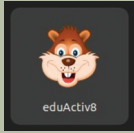
Chapter 5

24 Hour Clock

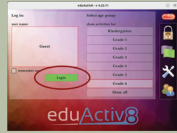


To the Activity

Eduactiv8



Log in



Maths



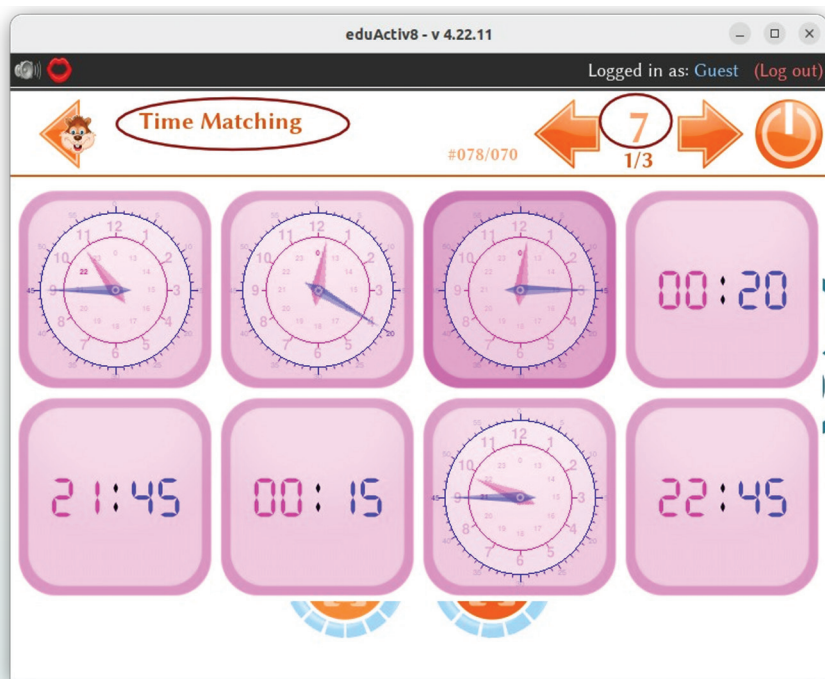
Time



Clock



Time Matching



Start from level 7.

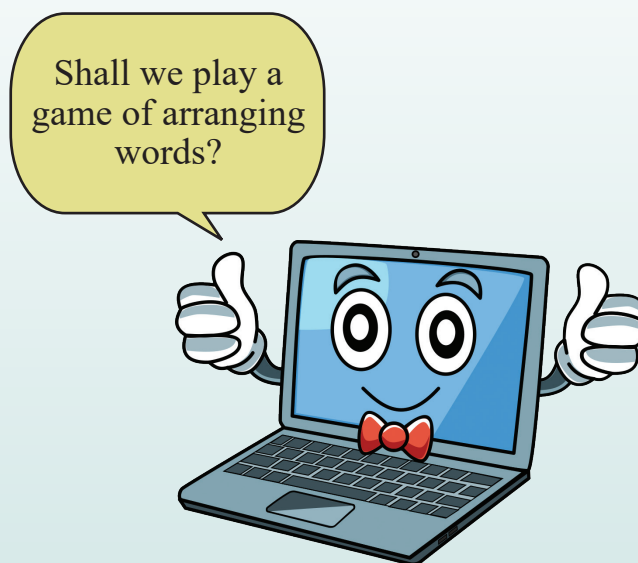
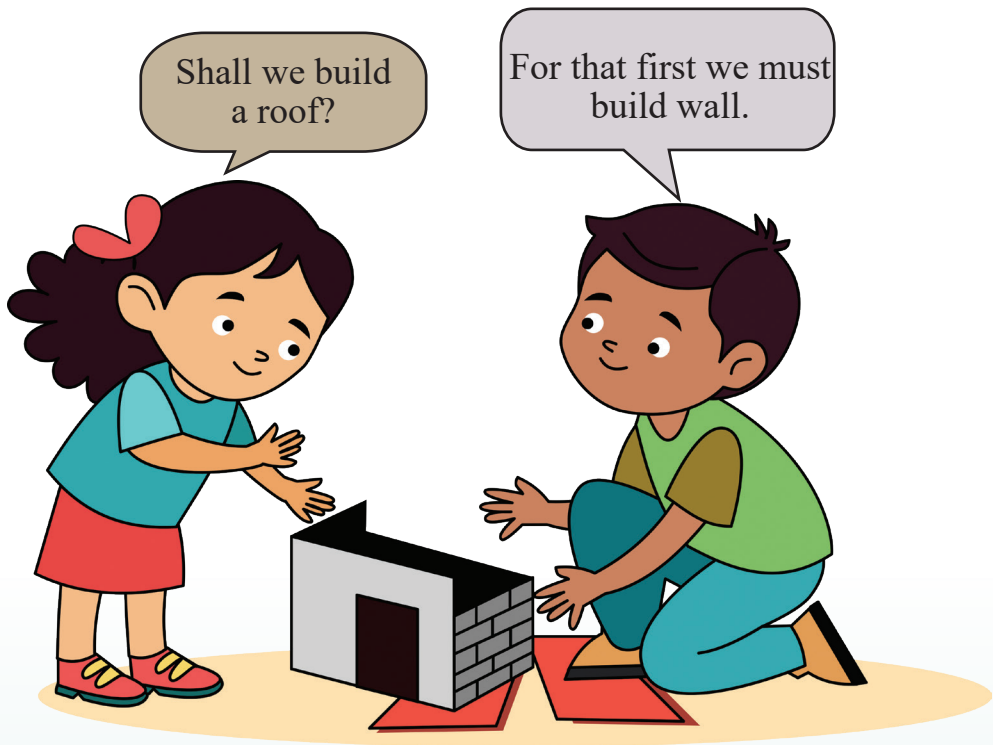


Select the clocks showing same time ok...

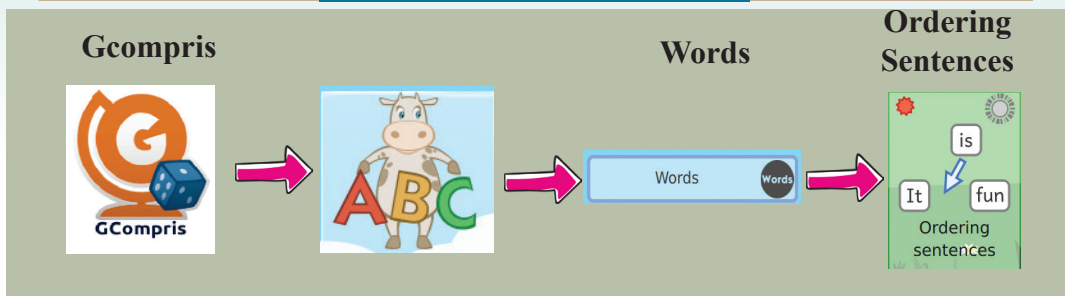


Chapter 6

Let's Arrange



To the Activity



Make use of the words to make meaningful sentences.

Drag the words in order to the upper box.

The screenshot shows the 'Ordering Sentences' game interface. At the top, a speech bubble from a penguin character says 'Drag the words in order to the upper box.' Below this, there are two boxes for word placement. The upper box contains the words 'Mom' and 'made'. The lower box contains the words 'a', 'me', and 'sandwich.'. Below the boxes, the text reads: 'Change the language of Gcompris to English to play this game.' At the bottom, there is a navigation bar with icons for a menu, help, home, back, forward, and a list.



Chapter 7

Play the Piano

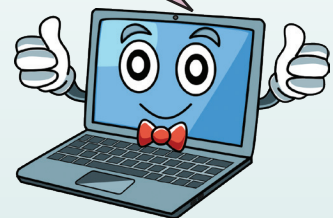
It's Meenu's birthday. She and her friends are celebrating and singing songs while cutting the cake.



Happy Birthday to you.
Happy Birthday dear Meenu
Happy Birthday to you

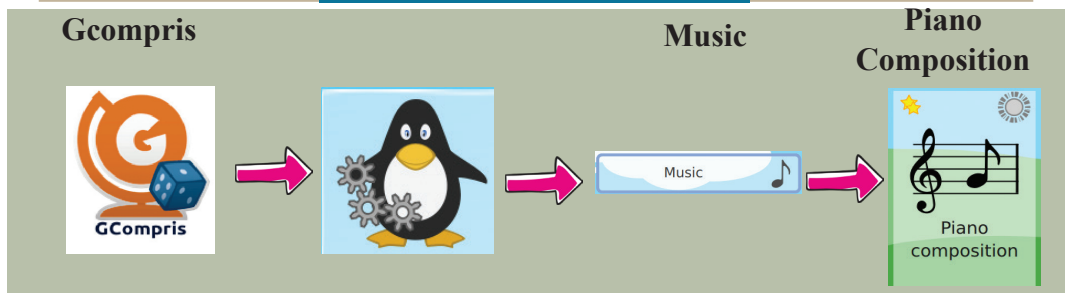


Do you know that our
computer has some
devices that help us
create songs?

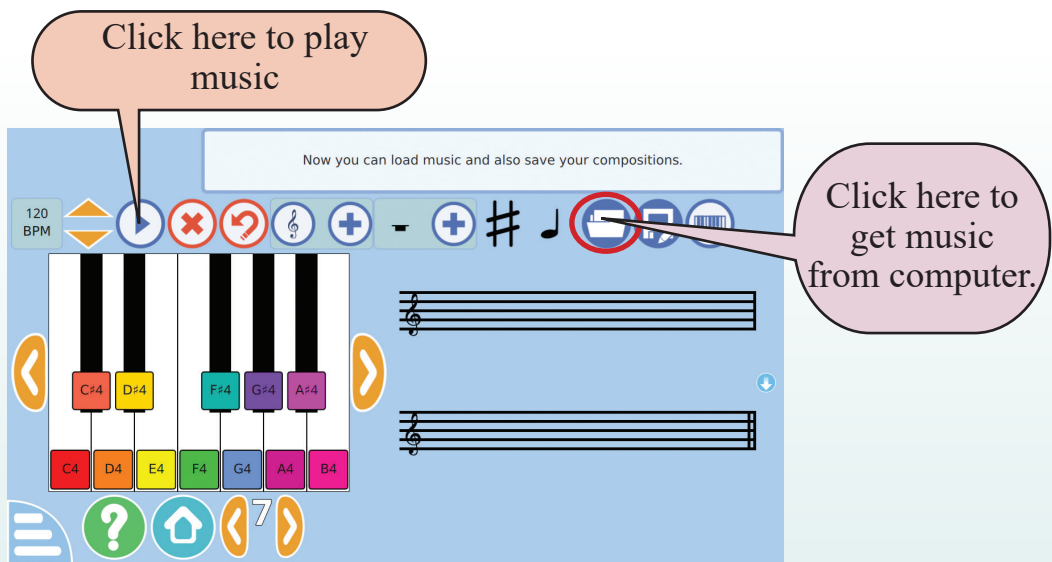


Did you listen to the birthday song?
Shall we hear this song in Computer's Piano?

To the Activity



Open level 7 and listen to the birthday song on your computer with the help of your teacher



Did you hear the song?

Shall we create this song using the piano?

Let's open Level 1.

This is the treble clef staff for high pitched notes.

120 BPM

To create a song, press these keys one by one.

To get the next keys press here.

G4 G4 A4 G4 C5 B4 B4
G4 G4 A4 G4 D5 C5 C5

Press the keys in
this order

When done play the
music and listen, ok..



Now compose these
lines and join with the
above lines.

G4 G4 G5 E5 C5 B4 A4 A4
F5 F5 E5 C5 D5 C5 C5



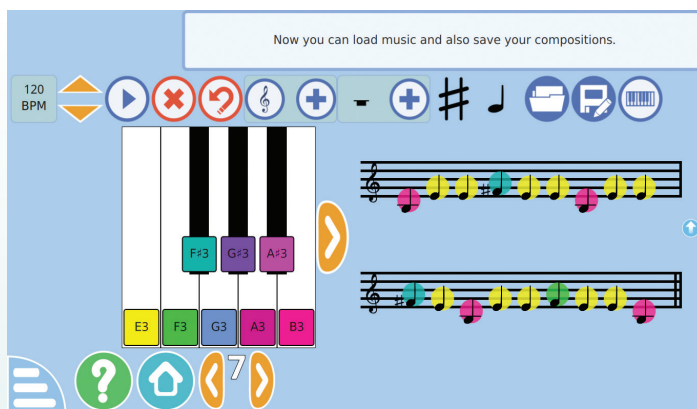
The piano has created the birthday song, hasn't it?
With the help of your teacher, will you try to complete the next levels?

Then open the 7th level and try to create the song given below.

**Thannannam
Thaanannam
Thaalathilaadi.....**



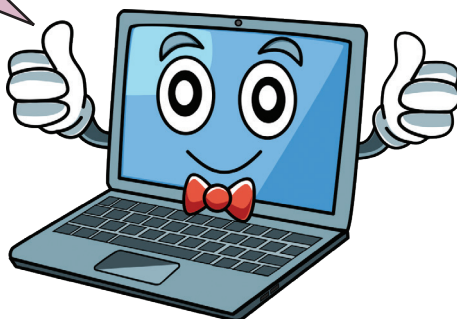
B3 E4 E4 F#4 E4 E4
B3 E4 E4 F#4 E4
B3 E4 E4 F#4 E4 E4
B3 E4 E4 F#4 E4



Let's make more songs.

Now try to create the songs you normally sing with the help of your computer.

Write the notes of the prepared song below and then play it on the piano.



.....

.....

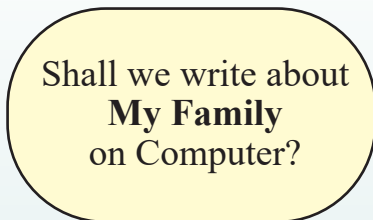
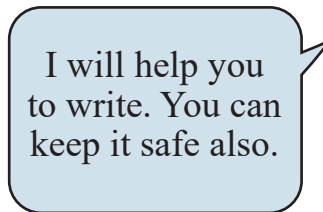
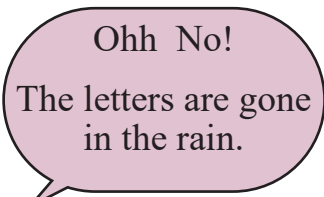
.....

.....

.....



Chapter 8

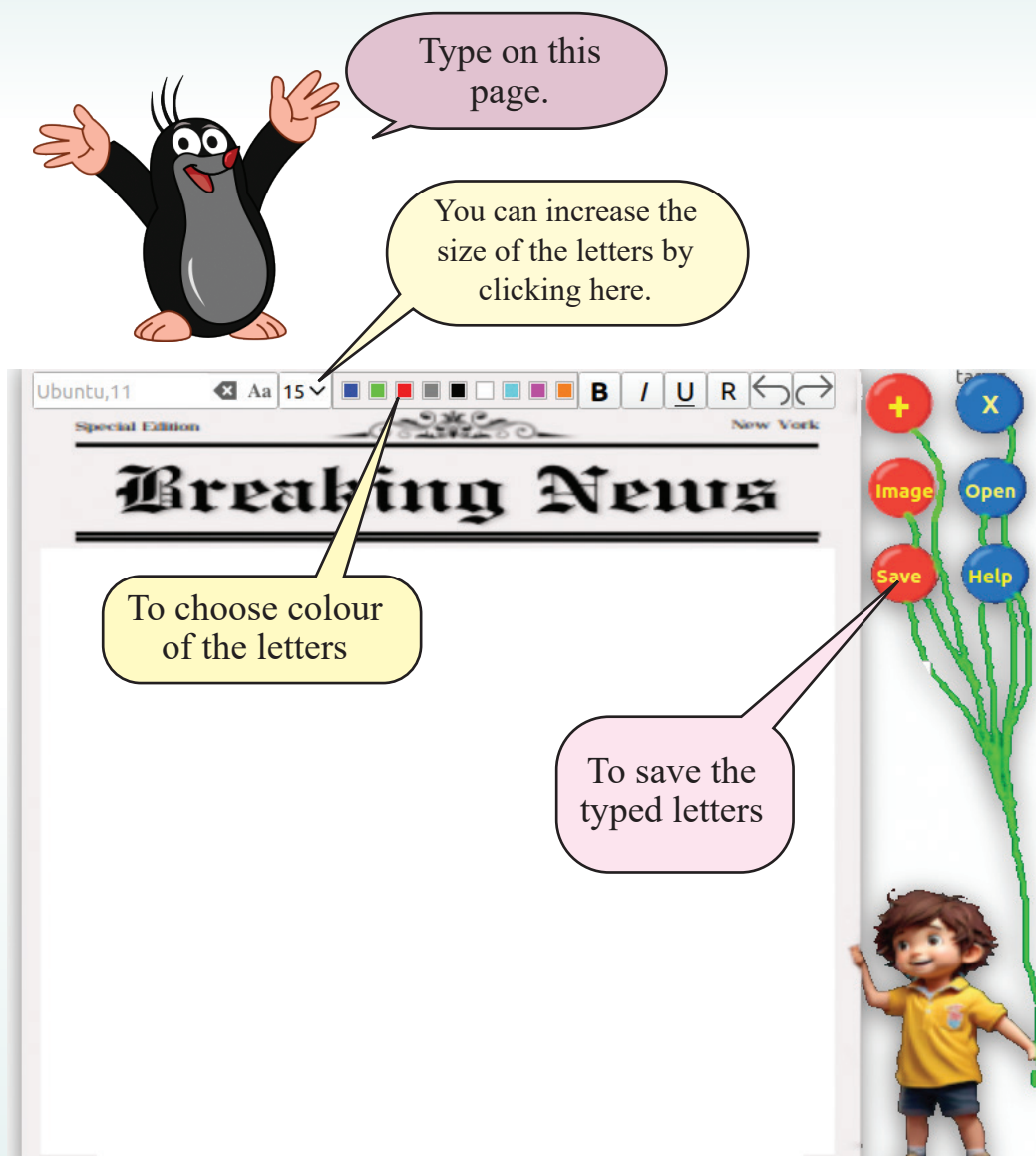


To the Activity

CuteWriter



CuteWriter



To the Teacher,

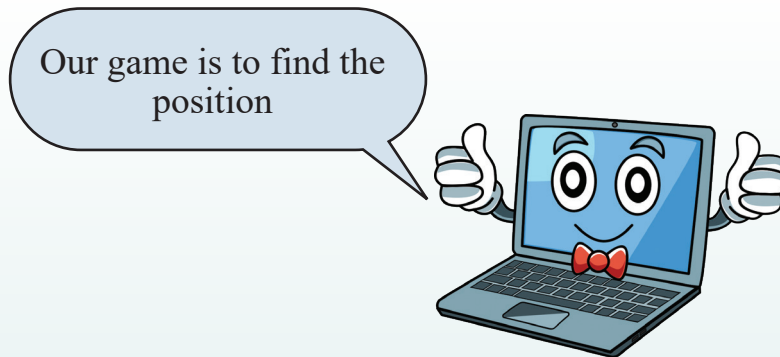
Make the students familiarise themselves with the keys Enter, Caps Lock, Space and Backspace.

The saved writings can be seen using the option Open and make changes if needed.

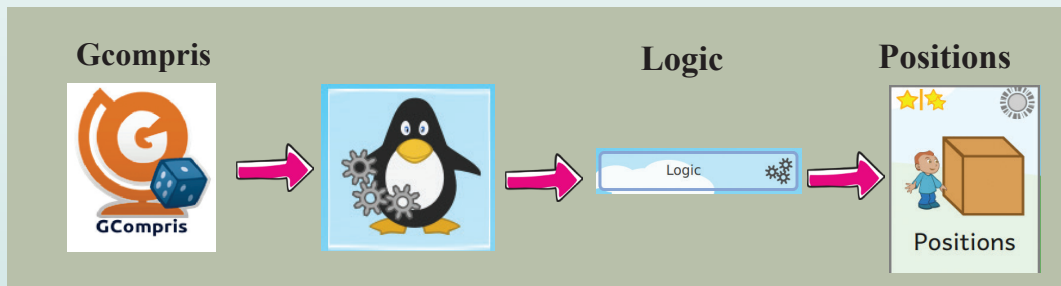


Chapter 9

Where am I?



To the Activity





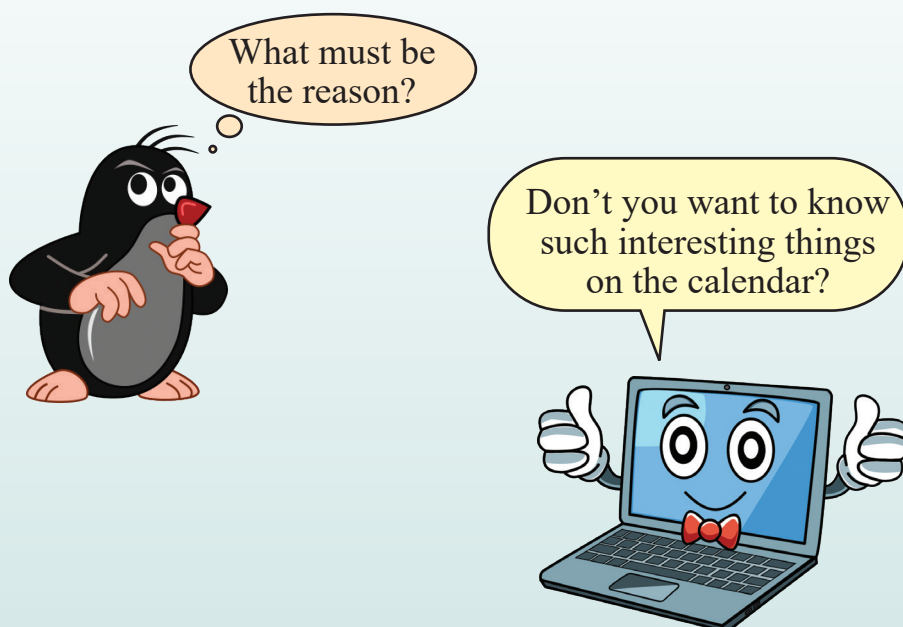
To The Teacher,

Change the language of Gcompris to English to play this game .



Chapter 10

Calendar Games

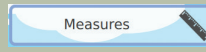


To the Activity

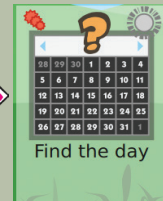
Gcompris



Measures



Find the Day



Try to find answer to the question given.

Find the date 19 days before September 1st.

August 2018						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
29	30	31	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	1
2	3	4	5	6	7	8

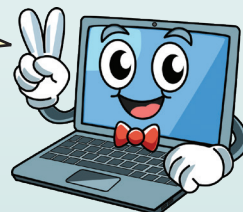


To check your answer click here.

1/6

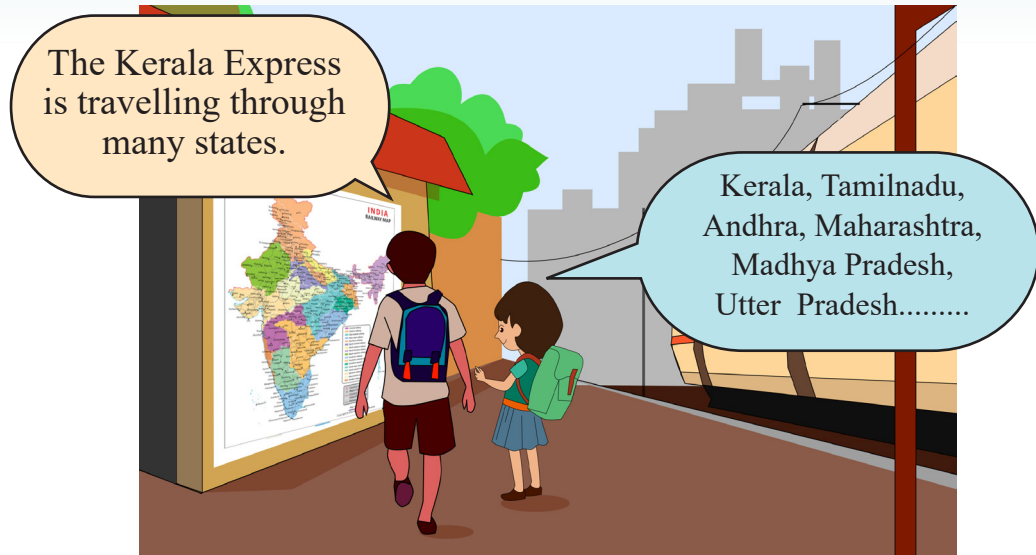


Go to the next levels and find the activities in February.



Chapter 11

States and Capitals



Check the software KGeography...

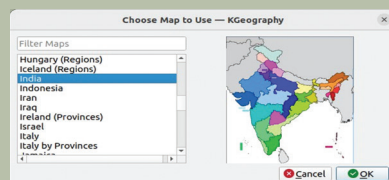


To the Activity

KGeography

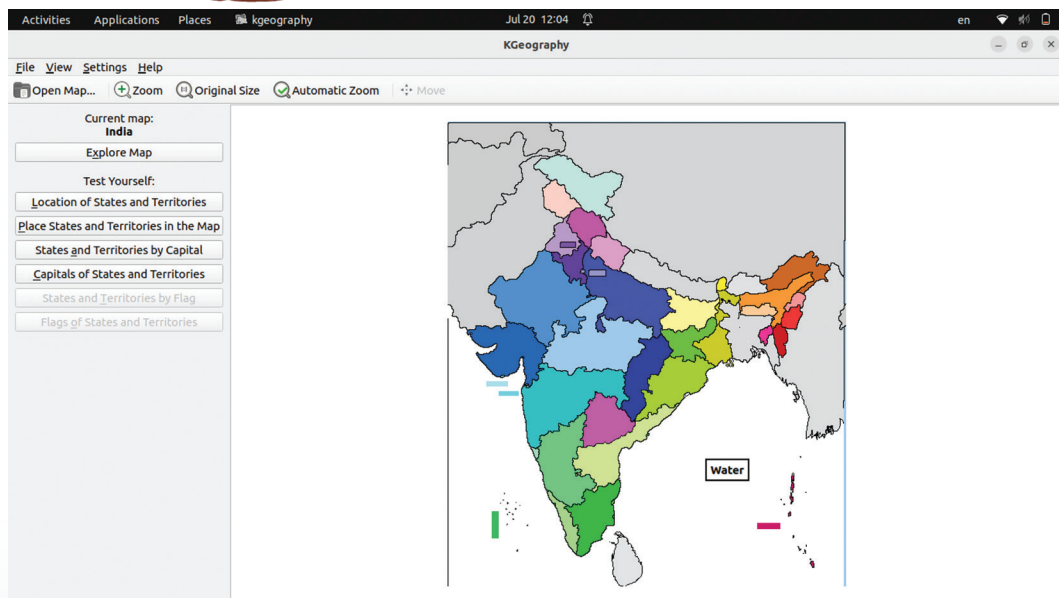


Map of India.



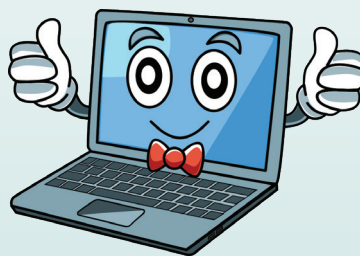


Check the map and find the states and their capitals that the Kerala Express passes through.



States	Capitals
1.	1.
2.	2.
3.	3.
.....	
.....	
.....	

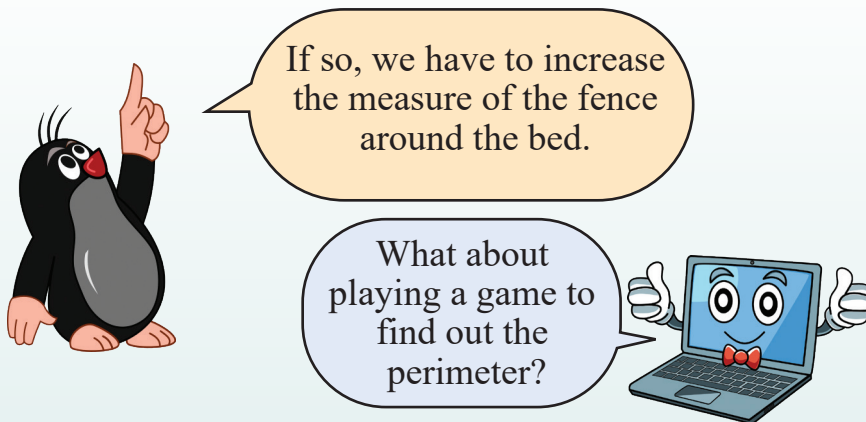
Complete the table, ok...



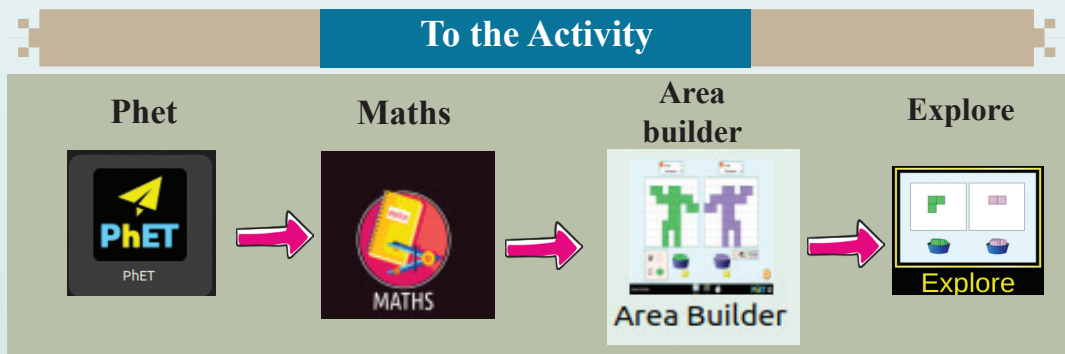
Chapter 12

The Measurement around

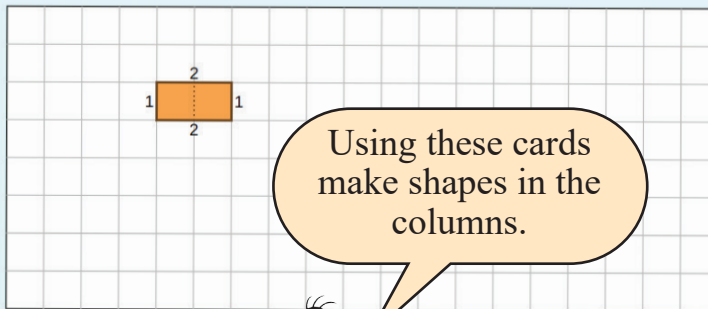
In round, a pit is made,
In length, a bed is placed,
That's how the red cheera seed is laid.



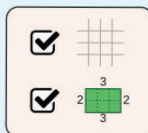
To the Activity



+ Values



Using these cards make shapes in the columns.

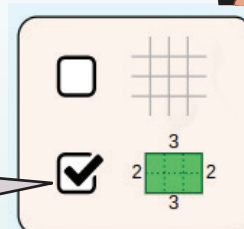


Click here to delete cards.



Look at the measurement of the sides and find out the perimeter.

Click here to hide the measurements.



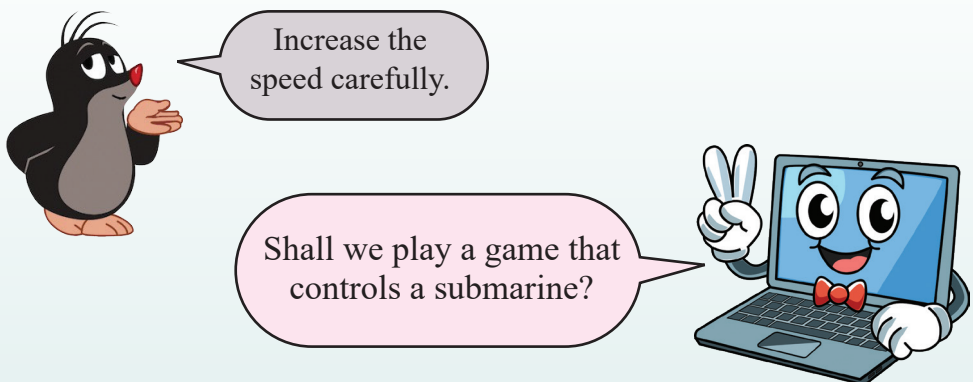
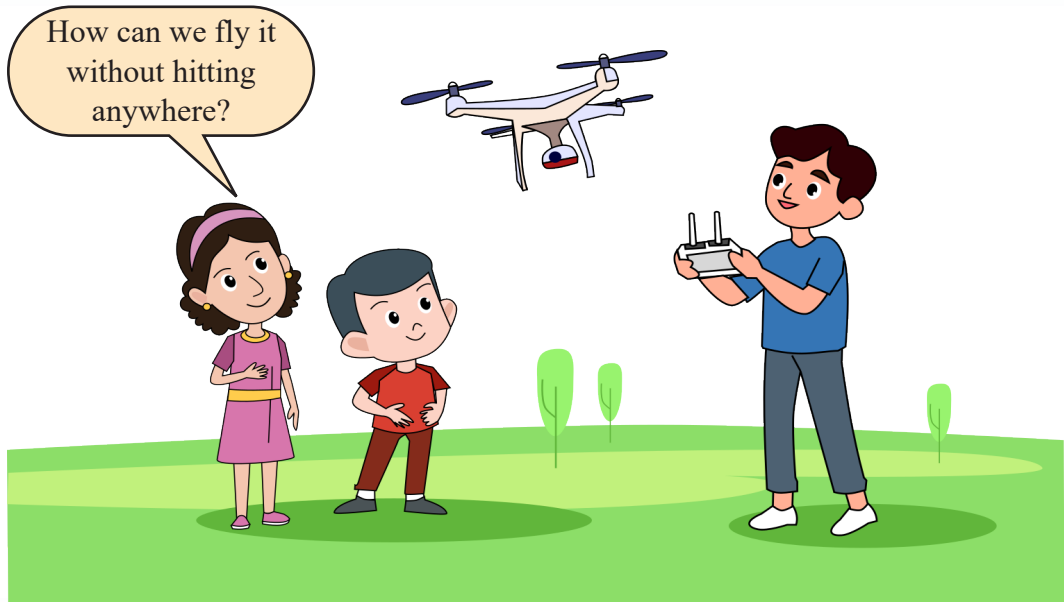
To the Teacher,

- Step-1: Find the perimeter by displaying the grid and measurements, and placing the square cards together.
- Step 2: Find the perimeter by removing the numbers and keeping only the grid. Then, find the perimeter by removing the grid and keeping only the numbers.
- Step 3: Find the perimeter by removing the numbers and grid and keeping only the shape.

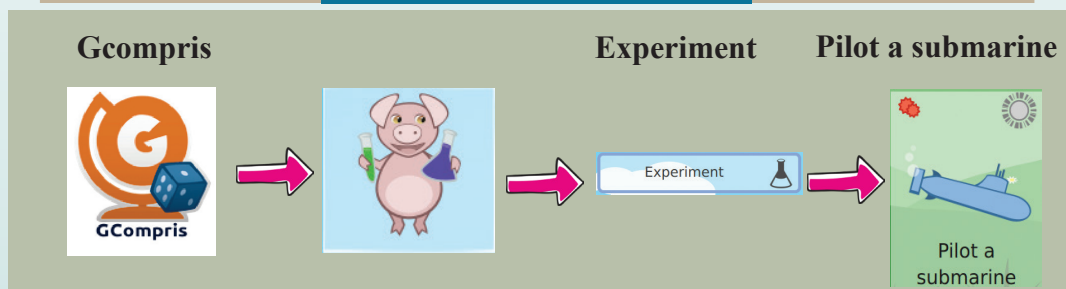


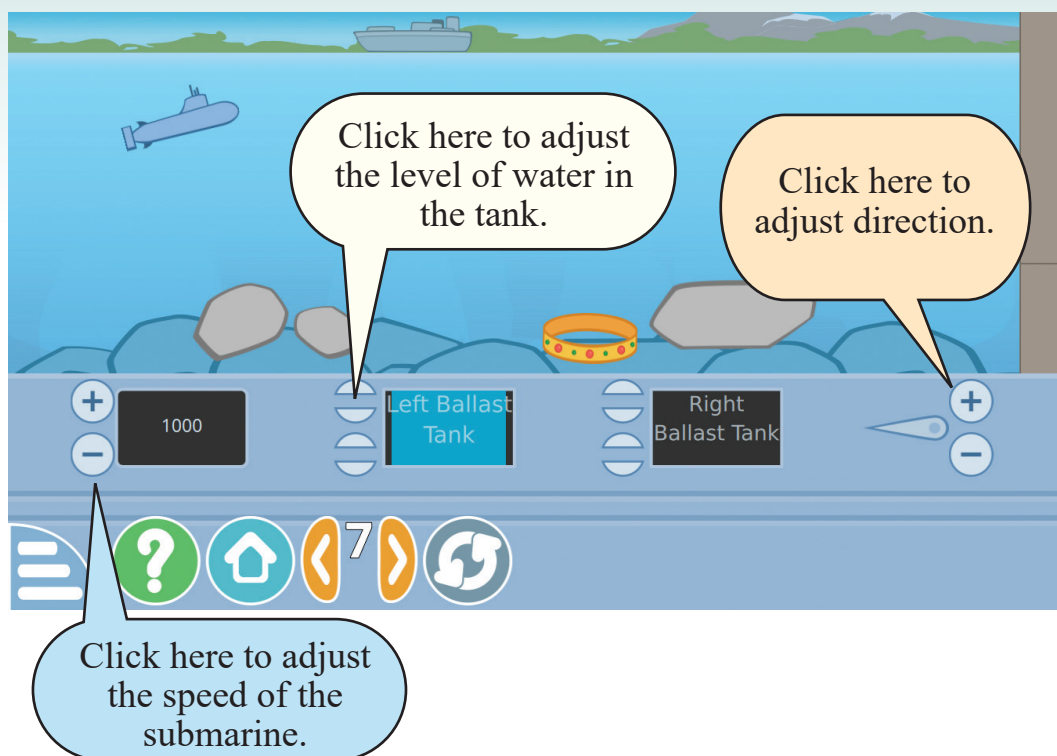
Chapter 13

Let's Help the Submarine



To the Activity





You may play all the levels.



Chapter 14

Utsav Mela



Did you see the picture of Praveshanotsavam in Ammu's school?

Didn't you see the picture of Ammu's school Praveshanotsavam?

What are the arrangements made at school to welcome the new friends?

Muthukudda,
Thoranam,
Chenda Melam,
Bandset



Which of these do you like the most?

•

Let's listen to the Chenda Melam performed by Ammu and her friends at school entrance ceremony.



The sound file of
Chenda melam is available
in School_Resources
folder of your computer.

Did you play the file?

Didn't you like it? Shall we conduct a Melam like this?

Get the musical instruments from Kalipetty.



To the Activity

Thalam

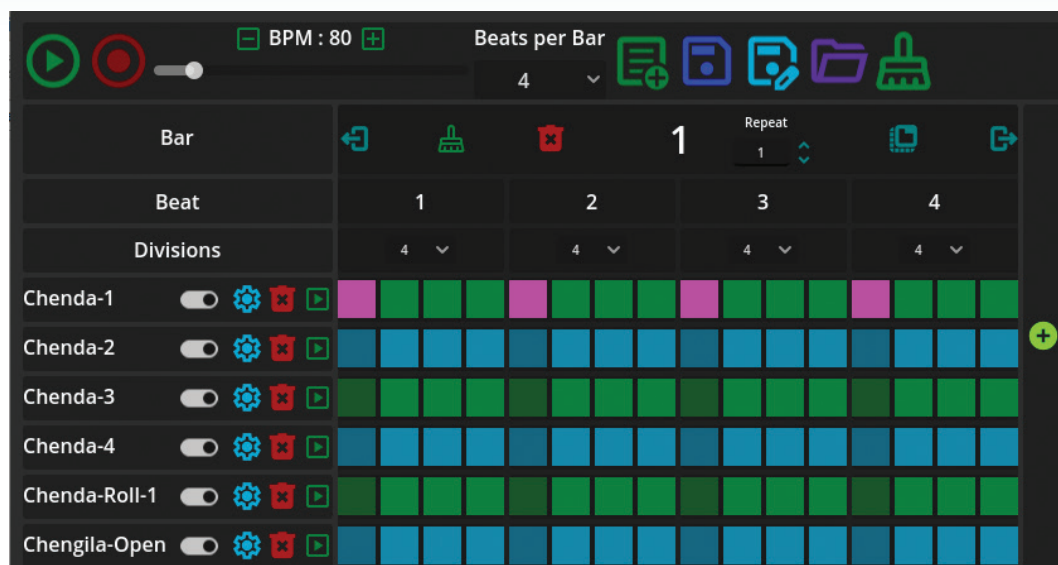


Thalam

The screenshot shows the PLAYBOX software interface. On the left, a list of instruments is displayed: Chenda-1, Chenda-2, Chenda 3, Chenda-4, Chenda-Roli, and Chengila-Open. Each instrument has a toggle switch, a settings gear icon, a delete icon, and a play icon. The main area is a grid where each row represents an instrument and each column represents a beat (1, 2, 3, 4). The grid is filled with green and blue squares, indicating the timing of the instruments. The top bar shows BPM: 80 and Beats per Bar: 4. A cartoon penguin is pointing at the 'Chenda-1' instrument in the list.

Here are the instruments.

Did you notice the tools for creating rhythm(Thaalam)?
Click on the Chenda 1 and see.



You can click like this to create a rhythm.

Now, click on the rhythm part of other instruments and create a melody in the way you like.



Once everyone is ready,
let's begin the Melam.

Save the work you
prepared with the help
of your teacher.



To theTeacher,

To change the
file format

To save
the file

UI interface for a music production software (PLAYBOX) showing a piano roll and various controls.

Top controls: BPM : 120, Beats per Bar (4), Repeat (1), and icons for undo, redo, delete, and save.

Table structure (Columns: Bar, Beat, Divisions, Chenda-1, Chenda-2, Chenda-3, Chenda-4, Chenda-Roll-1, Chengila-Open):

Bar	Beat	Divisions	Chenda-1	Chenda-2	Chenda-3	Chenda-4	Chenda-Roll-1	Chengila-Open
1	1	4	Green	Blue	Green	Blue	Green	Blue
2	2	4	Green	Blue	Green	Blue	Green	Blue
3	3	4	Green	Blue	Green	Blue	Green	Blue
4	4	4	Green	Blue	Green	Blue	Green	Blue



Chapter 15

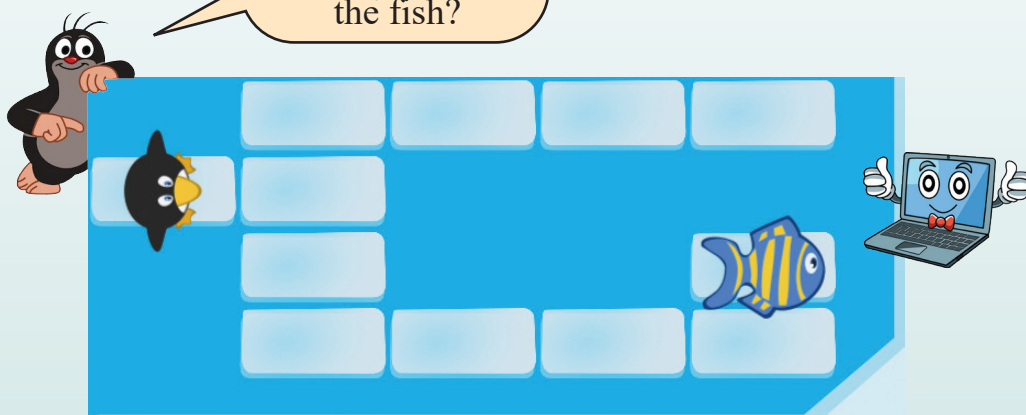
Show the way



What will I do on my way back?



Can you tell me the way to reach the fish?



To the Activity

Gcompris



Programming maze



Main function

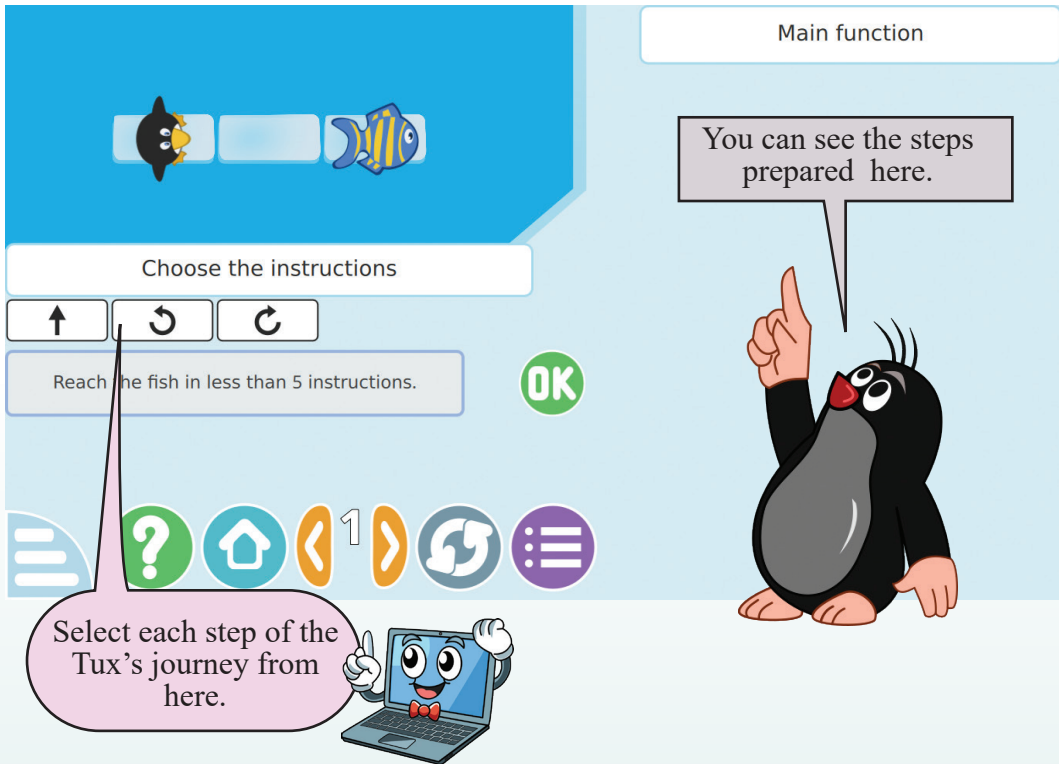
You can see the steps prepared here.

Choose the instructions

Reach the fish in less than 5 instructions.

OK

Select each step of the Tux's journey from here.

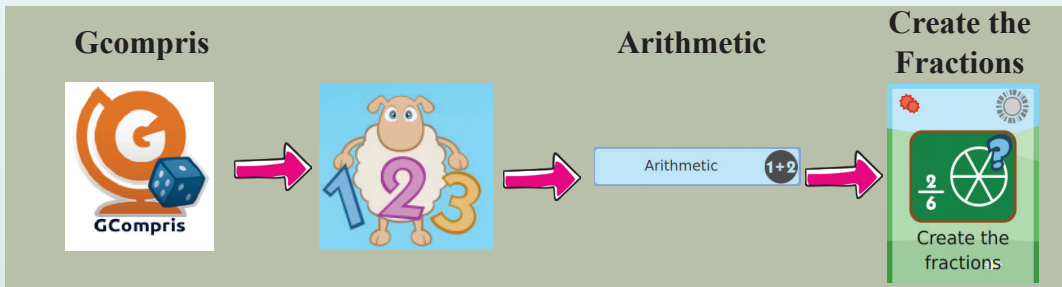


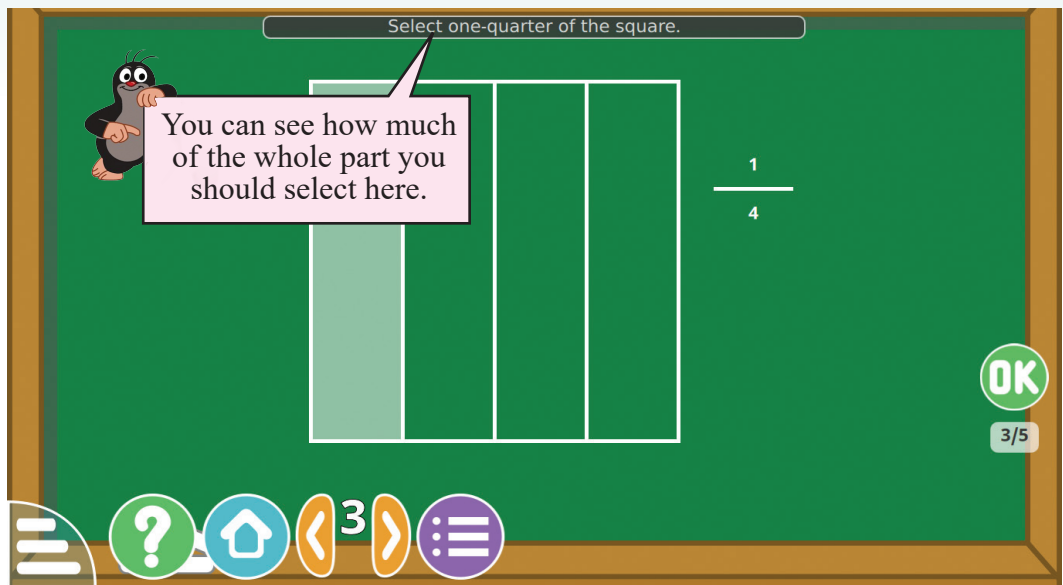
Chapter 16

Let's Divide Equally



To the Activity





You can play till 8 levels.



If you look at the image showing the parts, can you now say the fraction?

Now, let's play the next game, Find the Fractions.

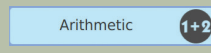


To the Activity

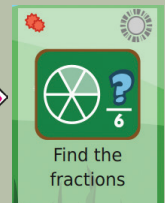
Gcompris



Arithmetic



Find the Fractions



Find the represented fraction.

Click here to give answer.

0
10

To check answer click OK.

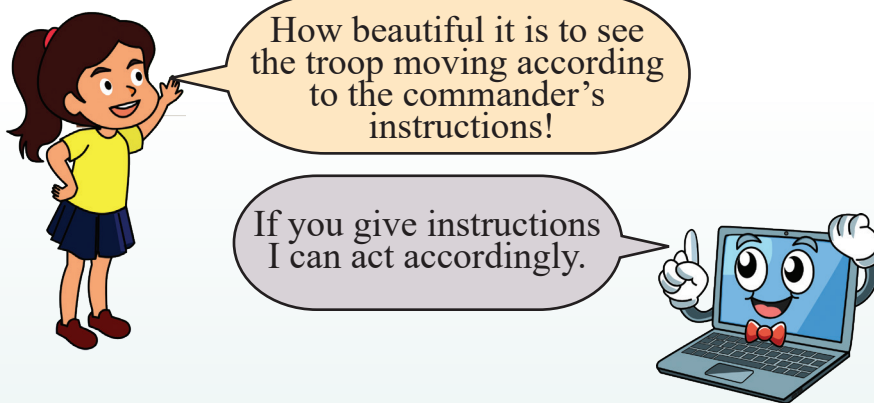
OK
1/5

Navigation icons: Home, Question, Previous, Next, List, and a hamburger menu icon.

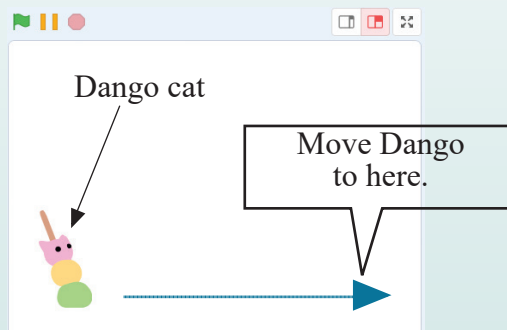


Chapter 17

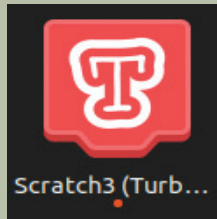
The Obedient Computer



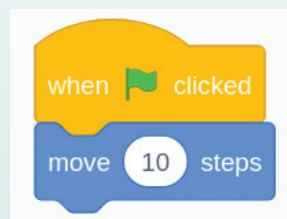
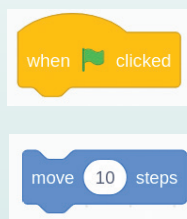
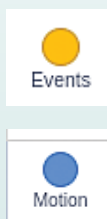
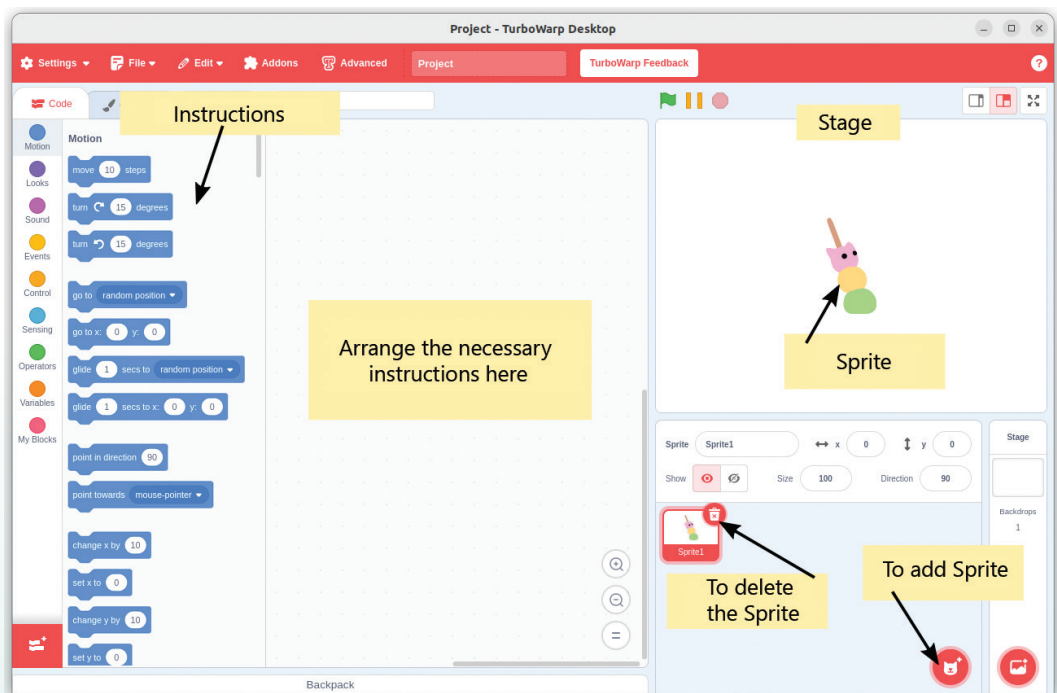
Shall we do the activity of moving Dango Cat by giving instructions?



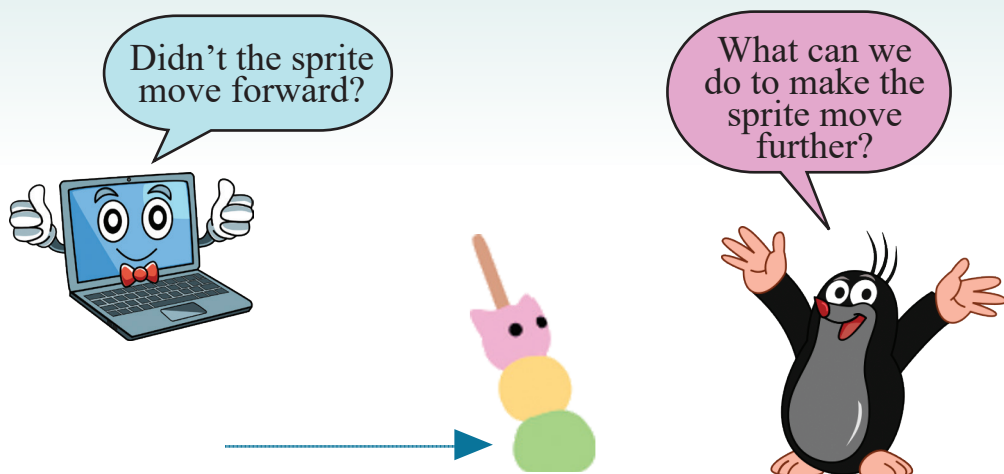
To the Activity



Scratch3 (TurboWarp)



Arrange the codes as shown here and click the  green flag.



Is there only one way to do this?

To make the Sprite move longer distances, try to rearrange the instructions in different ways with the help of your teacher.

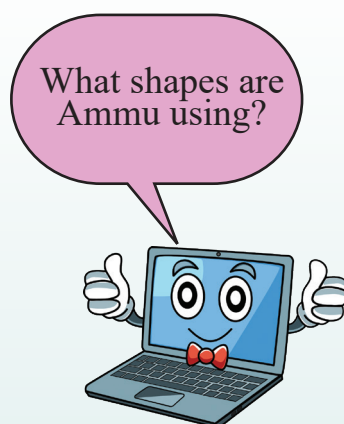
To the Teacher,

Discuss the possibilities given below with the students and run the codes.



Chapter 18

Let's Make Shapes



Shall we make pictures on computer using these shapes?

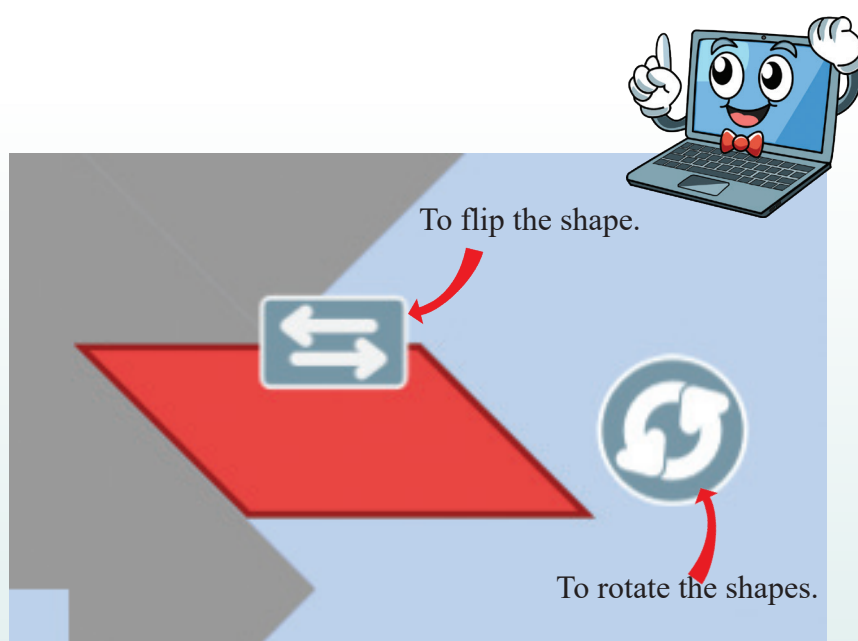
To the Activity

Gcompris



The Tangram
Puzzle Game





Chapter 19

Catch the Fish



To the Activity

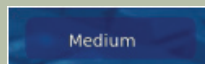
Tux typing



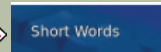
Fish Cascade

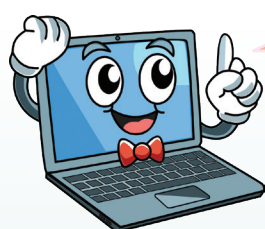
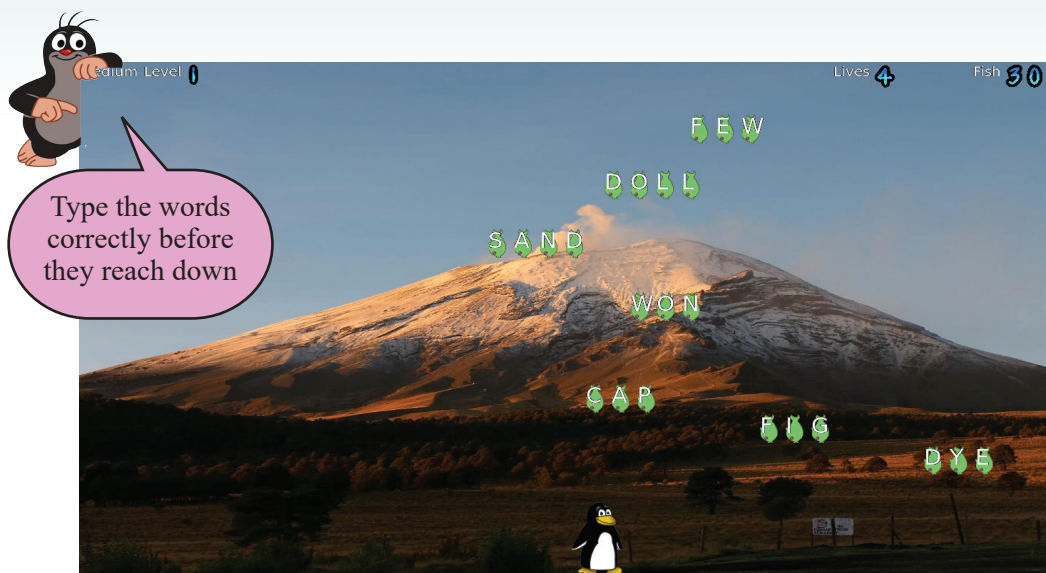


Medium



Short Words





Say the words
aloud while typing,
won't you?

To the Teacher,

Select Easy, Medium, Hard, Short words, Long words etc.



Notes

This image shows a full page of a notebook or worksheet. At the top, there is a solid light blue horizontal band. Below this band, the word "Notes" is centered at the top in a bold, black, serif font. The majority of the page consists of white space filled with evenly spaced horizontal dotted lines, providing a guide for writing. At the very bottom of the page, there is another solid light blue horizontal band, matching the one at the top.

To the Teacher,

As a continuation of the Playbox textbooks for classes 1 to 3, this fourth standard book introduces the use of computers for more focused activities. Here, the Edutainment method of conveying the concepts and basic skills of ICT and other subjects through games is also adopted.

For this , along with Gcompris software, Drawing, TuxMath, Eduactiv8, KGeography, Phet, Talam, Scratch 3, Tux Typing, Cutewriter, etc. are used. These can be used to bring out the various abilities of children through problem-solving and fun based games and activities. These activities are organised in such a way that they are connected with various contexts in other subjects too.

The unit Let's Draw Picture can be used to practice drawing on the computer and units such as Roman Numerals, Let's aim the Target and learn Multiplication, The Measurement around, Let's Divide Equally can be made use of to communicate arithmetics. Play the Piano and Utsav Mela are organized with the aim of generating interest in learning music. KGeography, a digital map software that introduces States and Capitals, is used for various map-related activities. 24-Hour Clock, Calendar Games, Where am I? can be used in relation to environment learning. The units Let's write on Computer and Catch the Fish can be used for language learning.

Children have to acquire coding skills at the lower primary level. The unit The Obedient Computer consists of a mini coding activity using the block programming language Scratch. It can be a fun experience for children to make the computer obey by giving instructions. Along with this, Cross the Canal, Let's Arrange, Help the Submarine, Show the Way, Let's Make Shapes help to foster logical thinking and problem solving skills.

Technology-friendly classrooms and ICT equipment set up in our schools will certainly empower you to carry out these activities. Along with that, create opportunities for the children to get direct experience of a topic as much as possible.

CONSTITUTION OF INDIA

Part IV A

FUNDAMENTAL DUTIES OF CITIZENS

ARTICLE 51 A

Fundamental Duties - It shall be the duty of every citizen of India

- a) to abide by the Constitution and respect its ideals and institutions, the National Flag and the National Anthem;
- (b) to cherish and follow the noble ideals which inspired our national struggle for freedom;
- (c) to uphold and protect the sovereignty, unity and integrity of India;
- (d) to defend the country and render national service when called upon to do so;
- (e) to promote harmony and the spirit of common brotherhood amongst all the people of India transcending religious, linguistic and regional or sectional diversities; to renounce practices derogatory to the dignity of women;
- (f) to value and preserve the rich heritage of our composite culture;
- (g) to protect and improve the natural environment including forests, lakes, rivers, wild life and to have compassion for living creatures;
- (h) to develop the scientific temper, humanism and the spirit of inquiry and reform;
- (i) to safeguard public property and to abjure violence;
- (j) to strive towards excellence in all spheres of individual and collective activity so that the nation constantly rises to higher levels of endeavour and achievements;
- (k) who is a parent or guardian to provide opportunities for education to his child or, as the case may be, ward between age of six and fourteen years.

CHILDREN'S RIGHTS

Dear Children,

Wouldn't you like to know about your rights? Awareness about your rights will inspire and motivate you to ensure your protection and participation, thereby making social justice a reality. You may know that a commission for child rights is functioning in our state called the Kerala State Commission for Protection of Child Rights.

Let's see what your rights are:

- Right to freedom of speech and expression.
- Right to life and liberty.
- Right to maximum survival and development.
- Right to be respected and accepted regardless of caste, creed and colour.
- Right to protection and care against physical, mental and sexual abuse.
- Right to participation.
- Protection from child labour and hazardous work.
- Protection against child marriage.
- Right to know one's culture and live accordingly.
- Protection against neglect.
- Right to free and compulsory education.
- Right to learn, rest and leisure.
- Right to parental and societal care, and protection.

Major Responsibilities

- Protect school and public facilities.
- Observe punctuality in learning and activities of the school.
- Accept and respect school authorities, teachers, parents and fellow students.
- Readiness to accept and respect others regardless of caste, creed or colour.



Contact Address

Kerala State Commission for Protection of Child Rights

'Sree Ganesh', T.C.14/2036, Vanross Junction

Kerala University P.O., Thiruvananthapuram-34, Phone : 0471 - 2326603

E-mail : childrights.cpcr@kerala.gov.in, rte.cpcr@kerala.gov.in

Website : www.kescpcr.kerala.gov.in

Child Helpline - 1098, Crime Stopper - 1090, Nirbhaya - 1800 425 1400

Kerala Police Helpline - 0471 – 3243000/44000/45000

online R.T.E Monitoring : www.nireekshana.org.in