

Projects

Project 1 (Lesson 1 - Revision)

1.1 My Moon walk

Build a Scratch project to show a rocket taking off from earth, landing on the moon and the astronaut walking on the moon. Following is a suggested sequence for the project:

- i. Rocket takes off.
- ii. Rocket orbiting the earth.
- iii. Rocket flying in space.
- iv. Rocket landing on the moon.
- v. Astronaut walking on the moon.

Hint: For each of the above you will need a background. Some of the instructions that can be used in the project are:



Project 2 (Lesson 2 - Gathering information and organizing)

andav

2.1 Let us go on an imaginary trip to the following:

- Plan a trip around the world with friends.
- Climb Mount Everest.

Gather images of sites that you want to visit, information about the sites, and organize this information appropriately.

2.2 Spell bee - By you and For you:

Form groups of five students. Give your group a name. Take a shoe box. Write the name of your group on the box. Prepare 5x5 inch cards as shown. When you are reading a newspaper, a story or a lesson you may find new words. Find the meaning of each of these new words. Write the word and the meaning on the card. Put your cards in alphabetical order in the shoe box. Use

these words in your conversation wherever appropriate. Each member of the group collects atleast 3 words in a week.

The class teacher holds a competition, **Spell Bee – By you and For you**, in the class. All the groups bring their shoe boxes (with the words they learnt) to the class. The teacher uses the words from the shoe boxes to conduct the competition. In this competition it is not enough to spell the word, you need to also give its meaning and use it in a sentence.

Project 3 (Lesson 3 - Advanced Scratch)

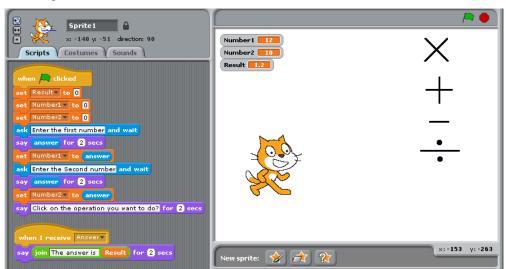
3.1 Pick the sequence of events and build a story

Form groups of 5 students. Build a Scratch project to write a story by choosing the sequence and the event as the user likes. For example: Provide a ball, a bone and a eating bowl for a dog. Let the user choose which of these items the dog picks up. Based on the item that the user chooses, the next sequence will be presented to the user. You can also ask the user write something which the character in the story says or converses about.

Hint: Use ask, answer, when key pressed, variables, lists (use lists to save the sequence and then narrate the whole story), if then else.

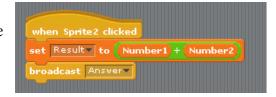
3.2 I am a maths genius

The following code can be used to add, subtract, divide, multiply two numbers. It has 4 Sprites for the four mathematical operations and one *Cat* Sprite to capture the numbers from the user and provide the answer. The program code for the *Add* Sprite is also given.



Form groups of three and do the following:

i. Modify the program so that you can do the four operations on 4 numbers. Explore if you can use list command to do this.



3.3 Can you meet my challenge?

Write a game where the *Cat* sprite gives an equation with two or more numbers (*Hint: lists, join, random*) and the user enters the answer. The *Cat* sprite compares the answer and tells the user whether the answer is correct or not. Imagine, design, program and make this game interesting and fun to play.

```
Examples: 15 + 35 + 50 \times 4 = ?

9 \times 9 + 19 = ?

100 \text{ divided by } 25 + 4 \times 25 - 4 = ?
```

Project 4 (Lesson 4 - Internet browsing)

4.1 Fun with Science:

i. Form teams with five students in each team.

Click on http://www.arvindguptatoys.com/toys.html. Visit each section and bookmark the toys that you find interesting. Now select two toys that interest the whole team. Read the process of making the toys. Collect the resources required for the toys. Make the toys first. Then distribute the resources for the two toys to other teams. Demonstrate and help other teams to make the toys that you selected.



The figure below shows the materials required for making a DC motor and an assembled DC motor made with this materials.





ii. Visit the site *http://oscar.iitb.ac.in*. Visit the sublink "Fun with Science" which can be found under the animations sub link. Watch videos of building the toys by Arvind Gupta himself.

Project 5 (Lesson 5 - Internet Searching)

5.1 Setup my factory please!

A list of products are given below. Imagine that you will be setting up a factory to manufacture one of the products from the list. You are doing a research to find everything about the product. Search and find from internet, the raw material required to manufacture the product. Present it in the class. Make it interesting by adding some illustrations/pictures etc. You can even make a scratch program to make the

presentation.

Bicycle
 Car
 Furniture
 Cloth
 Aeroplane
 Rockets
 Car
 Cloth
 Soaps
 Foam beds

9. Toys

Example: *Bicycle*

Frame: mostly made from steel, racing bikes made from aluminium for lighter weight.

Wheels: rim, spoke and hub made from steel for strength.

Saddle or seat: leather, plastic with steel springs and frame. Foam for cushioning.

Chain: chain wheel, sprocket wheel (back), chain are made of steel.

Chain guard: made of plastic.

Headlamp: bicycle lamp: steel +glass or plastic. *Front and rear mudguard:* Sheet metal or plastic.

Brake: hand.
Grip: aluminium.
Cable: steel.
Pads: rubber.

Pedal: steel and rubber/plastic.



Project 6 (Lesson 6 - Internet applications – Email)

6.1 What a story and I am one of the authors!

Write a story with a group of friends using email. The first person starts the story with a few lines and mails it to the next person in the group. The second person then adds to the story and mails to the next person. Keep going till the story is finished. Agree to some rules in advance such as how much each one can write and how many times the story will go around the group.

To start the story you can use one of the following situations:





Some suggestions: You can use a word processing file to write the story and mail it as an attachment. You can also add your illustrations. Give a name to the story and print it. The stories of all the groups can be bound together and put it in the library for others to read.

The class can decide name for the story book. Students can decide the cover page, contents page and preface. The preface content should be, how each story was written (using emails) and experience of each group. The preface should not exceed one page. Go ahead and create a story book of your own!

Project 7 (Lesson 7 - Internet Safety – Do's and Dont's)

- 7.1 Create a presentation on the safety rules that should be followed while using the Internet. Follow the guidelines given below to collect the information and create a presentation of the findings.
 - i. Explore the internet safety links given below on the internet. You are looking for facts, quotes, examples, images, sound clips, videos, and animations that you think are important aspects of the topic.

http://infosecawareness.in/

http://www.kidsmart.org.uk/beingsmart/

http://www.keynotesupport.com/smart-rules-using-internet.shtml

http://www.childnet-int.org/publications/resources.aspx

http://www.teachingideas.co.uk/welcome/3711.htm

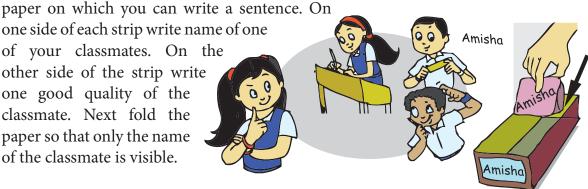
- ii. When you find something you like, check its Web page for a copyright notice. Sometimes people don't want their work copied at all. A good practice is to look for an e-mail link on the page. Then send email to ask permission to use the content in the site.
- iii. Copy any text you want by dragging across the words, then using the Edit-Copy command on the menubar. Paste the copied text into a text editor or a word processor file.
- iv. Save images by downloading them. Paste the images you've downloaded into the file.
- v. If you find interesting sound clips, videos, and animations make a note of these links along with the purpose for which you would like to refer to them.
- vi. Once you have collected your information, go over it carefully so that you can give clear reasons for why you found these to be especially important.
- vii. In your document, provide a table with the links to sound clips, videos and animations that you collected, with a column describing what each one is about.

Project 8 (Lesson 8 - Organized thinking: tables, lists, sorting, comparing data)

This is wonderful! I never knew I was like that! 8.1

Each student in the class takes a few blank sheets of paper. Cut the sheets into strips of

one side of each strip write name of one of your classmates. On the other side of the strip write one good quality of the classmate. Next fold the paper so that only the name of the classmate is visible.



Each student has to bring a small empty carton. Make a slit on the top of the box. To the side of the box the student's name is written. All the strips of sheet with the students are put in their respective boxes. Each student takes home the box and shows to the parents the nice things written about them by their class mates.



Project for all Lessons

Create a website for your school

Create 4 groups in the class. Each group will create one site for the school. Discuss with your group members and teachers to complete this activity. At the end of the activity all sites are compared and reviewed [on paper] by the teacher.

What are the various steps involved in this activity? Example:

- Look at existing school websites.
- What is the content that you want to display?
- From where do you get the content?
- What is the design of the first page?
- How do we design the subsequent pages?
- What will be the hyperlinks?

Note: You can use word processor to design the page, put the content and also add hyperlinks. The document can be converted to web pages. Explore this feature in the word processor.

Young India School



About us

Home Teacher Section Student Section Notice Board Library

Login to the Portal

School philosophy

<u>Curriculum</u>

Admission

Results

Time-table

Facilities

Contact us

We at the Young India School believe in nurturing the natural thinking of children. Our goal is to enable students to acquire knowledge, develop moral values, work in teams and becoming responsible citizens.



Login to the Portal	
Login ID	
Password	
O Parent O Teacher O Administ	trator got password?

Teacher's Corner

- The purpose of the project lesson is to supplement the learning of topics covered in previous lessons. It provides opportunities for independent thinking and developing the ability to work in a team. The lesson provides a variety of activities that the teacher can pick and choose from to give for computer lab or class room activity or as home assignment. Some projects can be used for assessment at the end of the semester. Some of the projects are suitable for individual and some are apt for group activity.
- For the group activity, ensure that the group is heterogeneous (mixed sex, has students of varying achievement levels, computer skills levels, access to computer beyond school). If possible, change the group for every activity so that students get exposure to work with classmates having a variety of working/thinking styles. Supervise that all the students participate actively and that they get equal opportunity to present their teams' work.
- Project 1 is suitable for assessment. Project 2.1 can be given as either individual or group activity to be done outside class hours. This can be carried out over a period of four weeks or so. The teacher can schedule to meet the group regularly to discuss the progress. Each group can be asked to make a presentation. They may be evaluated for this and allotted marks/grades.
- Project 2.2 can be an ongoing classroom activity. The teacher could have a 10 minute discussion in the beginning to explain the activity. The students perform the activity over a period of time and the presentation can be made at the end of the semester.
- Project 3.1, 3.2 and 3.3 can be used for assessment at the end of the semester. You can give these as either individual or group activity.
- Project 4 can be given as an assignment to be done during the mid-term break (diwali vacation). The students should be asked to give a presentation when the school reopens in the second term.
- Projects 5, 6 and 7 can be given as home assignment or computer lab activity. You can ask the students to make a presentation which may be evaluated to allot marks/ grades.
- Project 8 can be done as a classroom activity.
- The last project is slightly advanced. You can give this as a summer project at the end of the academic year.

Further Reading: