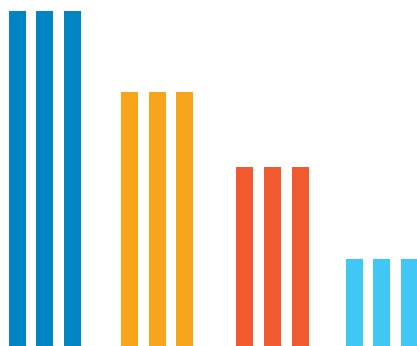




# ART INTEGRATION



Chapter Covered	Carbon Compounds
<b>Subjects and Art Integrated</b>	<b>Chemistry and Clay or Ball and Stick Modelling/collage making</b>
<b>Learning Objectives</b>	<p>Students will be able to :</p> <ul style="list-style-type: none"> <li>• Form different covalent compounds/carbon compounds by sharing electrons between atoms.</li> <li>• Learn about versatile nature of carbon</li> <li>• Understand the how the structure of covalent compounds looks like.</li> <li>• Utilize visual and performing arts to understand the topic</li> </ul>
<b>Materials Required</b>	<ul style="list-style-type: none"> <li>• Clay, Poster colours, Cotton buds, Ball, Stationary</li> </ul>
<b>Task Assigned Activity</b>	<ul style="list-style-type: none"> <li>• The class will be divided into groups.</li> <li>• Each group will prepare a model of any of the given topic using clay/ Ball and stick or any other eco-friendly material.</li> <li>Topic 1: Covalent compounds</li> <li>Topic 2: Carbon compounds</li> <li>Topic 3: Saturated hydrocarbons</li> <li>Topic 4: Unsaturated hydrocarbons</li> <li>Topic 5: Cyclic carbon compounds</li> <li>Topic 6: Homologous series</li> <li>• The group will be given time to discuss and make notes on their respective topics.</li> <li>• After a week, they can bring the required materials to the school and create the model.</li> <li>• Students can also take the help of their respective teacher.</li> <li>• After completing each group has to give a presentation.</li> <li>• Each student has to speak for at least one minute.</li> </ul>
<b>Learning Outcomes</b>	<ul style="list-style-type: none"> <li>• They will enhance their creativity</li> <li>• They will start valuing every participant's opinion and idea.</li> <li>• Their communicative, collaborative, critical thinking and leadership skills shall be enhanced.</li> </ul>

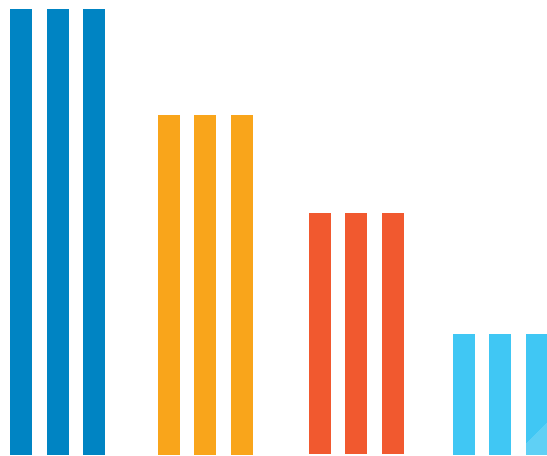


# ART INTEGRATION

<p><b>Self -Evaluation and Follow up</b></p>	<ul style="list-style-type: none"> <li>• Students can summarise the learnings from the activities undertaken.</li> <li>• Student can tell teacher about the activity they enjoyed the most and they can express their opinion on the performed activity.</li> </ul>
<p><b>Ideas</b></p>	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Water <math>H_2O</math></p> </div> <div style="text-align: center;"> <p>Carbon Oxide <math>CO_2</math></p> </div> <div style="text-align: center;"> <p>Ammonia <math>NH_3</math></p> </div> <div style="text-align: center;"> <p>● Carbon ● Hydrogen ● Oxygen ● Nitrogen</p> </div> </div> <div style="margin-top: 20px;"> </div> <div style="margin-top: 20px; border: 1px solid green; padding: 5px;"> <p>● Carbono ● Hydrogeno ● Oxygeno ● Nitrogeno</p> </div> <div style="margin-top: 20px; display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p><math>CH_4</math></p> </div> <div style="text-align: center;"> <p><math>CCl_4</math></p> </div> </div> </div>
<p><b>Resources/Links</b></p>	<p>Framework model of :</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p><math>O_2</math>, <math>N_2</math> Crown Structure of Sulphur</p> </div> <div style="text-align: center;"> <p>Benzene ball and stick model</p> </div> </div>



# ART INTEGRATION



(A) On the A-4 sheet show either pictorial representation collage 2D or 3D image of 'Periodic table of the elements' using any waste material available at home.

(B) Make element toran

**Refer :**

<https://www.youtube.com/watch?v=0b5LAds2p4w>

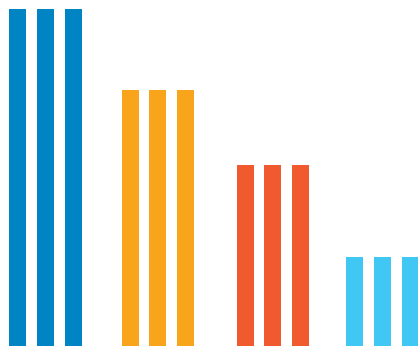
(C) Make a Model of electronic configuration of hydrogen using kitchen materials

**Refer :**

<https://www.youtube.com/watch?v=TUBFI8UlduE>



# ART INTEGRATION


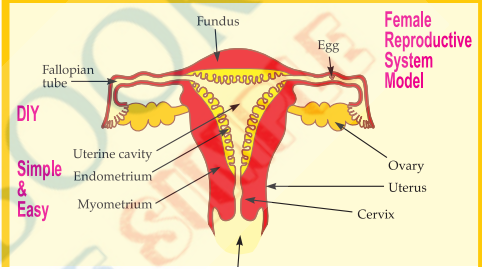

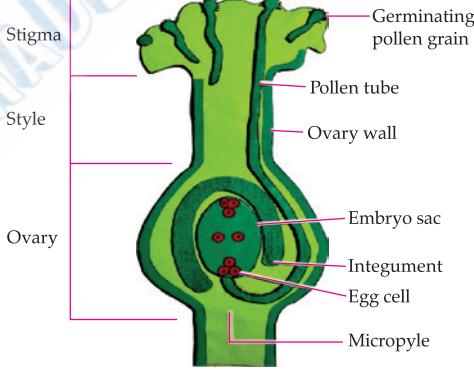
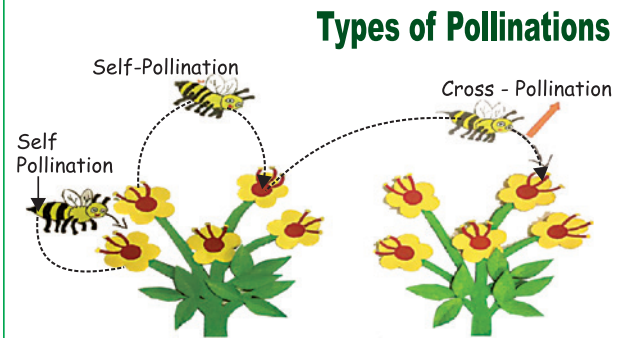



Chapter Covered	How do Organisms reproduce ?
Subjects and Art Integrated	Biology/ Quiz Time/ Model Making
Learning Objectives	<p>Students will be able to :</p> <ul style="list-style-type: none"> <li>• Understand the structure of a flower.</li> <li>• Understand the concept of pollination and reproduction in plants</li> <li>• Understand the parts of human male and female reproductive system</li> <li>• Utilize visual and performing arts to understand the topic</li> </ul>
Materials Required	Thermocol, colours, stationary, cardboard
Task Assigned Activity	<p>Activity 1:</p> <ul style="list-style-type: none"> <li>• Students would be asked to pick the chits which will have the name of parts of a flower, and human male and female reproductive system.</li> <li>• Thereafter one by one they will come forward, enact and provide clues.</li> <li>• The students sitting as audience are required to identify the names of the parts of the reproductive system. For instance,               <ol style="list-style-type: none"> <li>'I help the plant to reproduce. Who am I?'</li> <li>I am the male part of flower. I make pollens. Who am I ?</li> </ol> </li> </ul> <p>Activity 2:            Model making: Prepare a model of any of this using clay, thermocol or any other eco-friendly materials.</p> <ol style="list-style-type: none"> <li>Structure of a flower</li> <li>Pollen-Pistil interaction</li> <li>Types of Pollination</li> <li>Human female reproductive system</li> <li>Human Male reproductive system</li> </ol>
Learning Outcomes	<ul style="list-style-type: none"> <li>• They will enhance their creativity</li> <li>• They will develop confidence and build ability to express.</li> </ul>



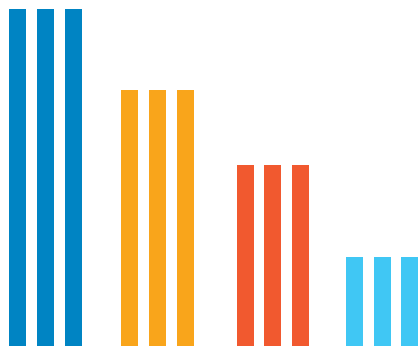


# ART INTEGRATION

<p><b>Self-Evaluation</b></p>	<p>The students (at the end of activity) can analyse their response, interest and flow of thoughts and ideas. The ideas and writings can be shared with the class.</p>
<p><b>Follow up</b></p>	<ul style="list-style-type: none"> <li>• Worksheets will be provided to the class where they have to write whatever terminologies they came across with meaning.</li> <li>• Discuss about the topic in the class.</li> </ul>
<p><b>Ideas</b></p>	<div style="display: flex; flex-direction: column; align-items: center;">     <div style="border: 1px solid green; padding: 5px; margin-top: 10px;"> <p style="text-align: center;"><b>Types of Pollinations</b></p>  </div> </div>
<p><b>Resources/Links</b></p>	<p>Making female reproductive System Model</p> 



# ART INTEGRATION

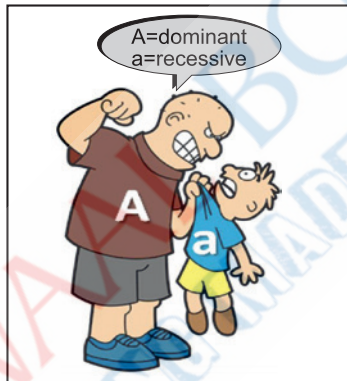


Chapter Covered	Heredity and evolution
<b>Subjects and Art Integrated</b>	<b>Biology/ Sketching/ Model Making/Art</b>
<b>Learning Objectives</b>	Students will be able to : <ul style="list-style-type: none"> <li>• DNA is the genetic blueprint of a life-form.</li> <li>• Structure of a DNA</li> <li>• Utilize visual and performing arts to understand the topic</li> </ul>
<b>Materials Required</b>	A4 or A3 size sheet, Stationary, art and craft materials
<b>Task Assigned Activity</b>	Activity 1: <ul style="list-style-type: none"> <li>• Students can construct a funny cartoon on any topic of Heredity by either drawing or sketching.</li> <li>• The students may also enact their topics.</li> <li>• Discuss about the topic in the class.</li> </ul> Activity 2: <ul style="list-style-type: none"> <li>• The students are divided into groups to prepare a scrapbook/ 2D or 3D models (with beads/straws/popsicles) /ppt explaining 'double helical structure of DNA.</li> <li>• They can use pieces of candy to make a model for a short section of DNA—enough to get a sense of what DNA is like and how it encodes life.</li> <li>• Then they will discuss about the activity in the class under the guidance of the facilitator.</li> </ul>
<b>Learning Outcomes</b>	<ul style="list-style-type: none"> <li>• They will enhance their creativity</li> <li>• Students will develop the skill of creating model by themselves.</li> </ul>
<b>Self -Evaluation</b>	<ul style="list-style-type: none"> <li>• Students will themselves reflect upon their performance and will pen down their areas of improvement and how they would work towards them.</li> </ul>
<b>Follow up</b>	<ul style="list-style-type: none"> <li>• Self assessment</li> <li>• Peer evaluation</li> </ul>



# ART INTEGRATION

## Ideas



## Resources/Links

• Candy DNA Model :

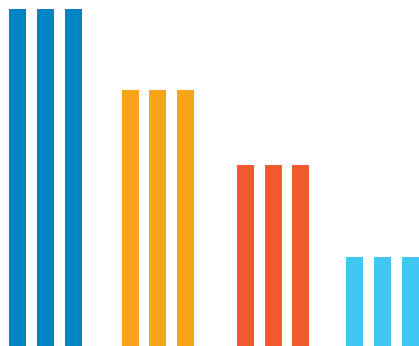


• 3D DNA Model :





# ART INTEGRATION






Chapter Covered	Electricity
<b>Subjects and Art Integrated</b>	Physics/Electric Power
<b>Learning Objectives</b>	<p>Students will be able to :</p> <ul style="list-style-type: none"> <li>• Understand the concept of electric power</li> <li>• Calculate electricity bill of 3 of the neighbours and compare and analyse the electricity consumption by 3 neighbours with your own house E bill.</li> <li>• Analyse the steps to save electricity (energy)</li> </ul>
<b>Materials Required</b>	Electricity bills
<b>Task Assigned Activity</b>	<ul style="list-style-type: none"> <li>• Choose a month of calculation of E-bill.</li> <li>• Find out the difference in the meter readings at the beginning and at the end of chosen month.</li> <li>• Calculate the bills of 3 neighbours along with your own house.</li> <li>• Talk to the neighbours about different electrical and electronic gadgets they are using every month (on an average)</li> <li>• Make a bar graph of consumption in that month vs. individual house,</li> <li>• Investigate the reason behind high consumption of electricity in a house with respect to others.</li> <li>• Suggest the future remedy.</li> <li>• Suggestions to reduce the bill- e.g. solar cells can be used to reduce the consumption of electricity and also to support the usage of renewable sources of energy.</li> </ul> <p>The students can present a skit on 'Saving electricity'</p>
<b>Learning Outcomes</b>	<ul style="list-style-type: none"> <li>• They will develop confidence and build ability to express.</li> <li>• Their will start valuing every participant's opinion and idea.</li> </ul>
<b>Self -Evaluation and Follow up</b>	<ul style="list-style-type: none"> <li>• A debate can be organized on the topic.</li> <li>• Students can write an article or prepare a poster on 'Save Environment'.</li> </ul>



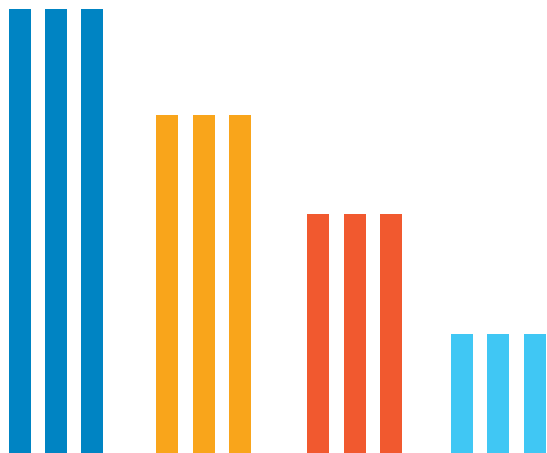


# ART INTEGRATION

<b>Ideas</b>		 <p>Turn off the lights before leaving</p>
<b>Resources/Links</b>	<p>How to calculate electricity bill</p> 	



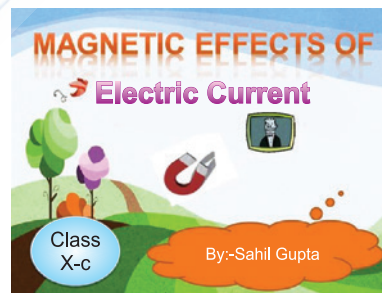
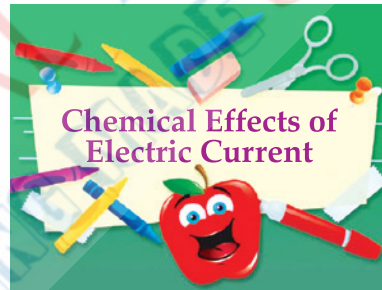
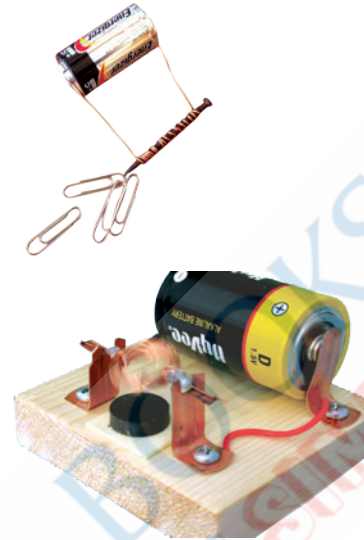
# ART INTEGRATION



Chapter Covered	Magnetic effects of current
<b>Subjects and Art Integrated</b>	<b>Physics/ Model Making/ Art</b>
<b>Learning Objectives</b>	Students will be able to : <ul style="list-style-type: none"> <li>• Learn about the electromagnet</li> <li>• Understand the concept of electric motor</li> <li>• Utilize visual and performing arts to understand the topic</li> </ul>
<b>Materials Required</b>	Copper wire, Metal objects, Magnet, Iron nail, and Battery
<b>Task Assigned Activity</b>	<ul style="list-style-type: none"> <li>• The class is divided into groups.</li> <li>• Each group will be given a topic:               <ol style="list-style-type: none"> <li>(i) Making electromagnet</li> <li>(ii) Simple Electric motor</li> <li>(iii) Magnetic effects of current</li> </ol> </li> <li>• Do a researching on the topic.</li> <li>• Prepare a Model on any of these.</li> <li>• Documentation on ppt/ word will be followed by a Talk about the understanding of this topic.</li> </ul>
<b>Learning Outcomes</b>	<ul style="list-style-type: none"> <li>• Their communicative, collaborative, critical thinking and leadership skills shall be enhanced.</li> <li>• They will develop confidence and build ability to express.</li> <li>• They will start valuing every participant's opinion and idea.</li> </ul>
<b>Self -Evaluation</b>	<ul style="list-style-type: none"> <li>• Application of the concept learned</li> <li>• Self assessment</li> <li>• Peer evaluation</li> </ul>

**Follow up**

- Worksheets will be provided to the class where they have to write whatever terminologies they came across with meaning.
- Discuss about the topic in the class.

**Ideas****Resources/Links**

How to make Electromagnet



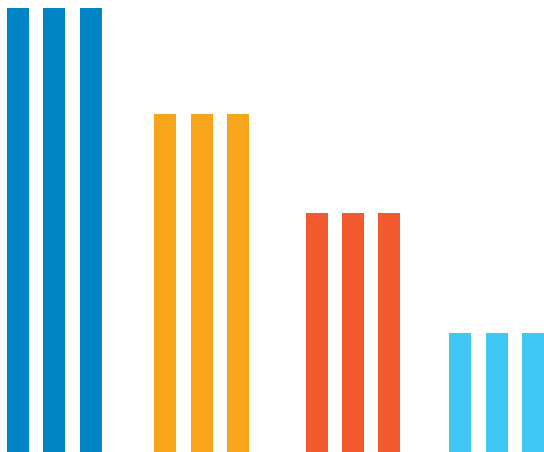
How to make  
Simple Electric Motor



Art Integrated  
Project



# ART INTEGRATION



Chapter Covered	Our Environment
<b>Subjects and Art Integrated</b>	<b>EVS/ Model Making</b>
<b>Learning Objectives</b>	<p>Students will be able to :</p> <ul style="list-style-type: none"> <li>• Understand the concept of food chain, various trophic levels and flow of energy in an ecosystem</li> <li>• Learn about ozone hole</li> <li>• Understand the greenhouse effect and global warming.</li> <li>• Utilize visual and performing arts to understand the topic.</li> </ul>
<b>Materials Required</b>	Coloured sheets, sketch pens, Cardboard, thermocol, Cotton, toothpick, stationary
<b>Task Assigned Activity</b>	<p><b>Activity 1:</b></p> <ul style="list-style-type: none"> <li>• Students will make trophic levels in a food chain or diagram showing flow of energy in an ecosystem with the help of wool/cotton/waste-cloth/newspaper or any other material available at their home on A4 size sheets.</li> <li>• The students can then combine each of the food chain to form a food web.</li> <li>• The food chain made by each class can then be combined to form a bigger food web.</li> <li>• Discuss about the topic in the class.</li> </ul> <p><b>Activity 2</b></p> <ul style="list-style-type: none"> <li>• The class is divided into five groups.</li> <li>• Each group will do a researching on the following topics and make a project file :               <ol style="list-style-type: none"> <li>(a) Ozone hole</li> <li>(b) Greenhouse effect and global warming</li> <li>(c) Garbage disposal</li> </ol> </li> </ul>





# ART INTEGRATION

- Documentation will be followed by a Talk on any one of the above topics.
- You can also make models/poster/ on any of these topics.

### Activity 3:

(This will be an Art Integrated project under Ek Bharat Shrestha Bharat Concept, defined under the latest syllabus of Art Integrated Learning by the CBSE.)

You all would have been watching a lot of News these days, keeping a track of all the latest happenings on the COVID 19. So now, we bring to YOU, a chance to be a REPORTER. But of course, a different kind of reporting.

So the **entire class will divide itself into a Group of 8 Members and divide topics as shown.**

**TOPIC 1:-** Production and consumption of electricity in Delhi and Sikkim.

**TOPIC 2:-** Methods and technology used for making food in Delhi and Sikkim.

**TOPIC 3:-** Natural phenomena observed in Delhi and Sikkim.

**TOPIC 4:-** Analysis of Indigenous soil and Water conservation measures.

**TOPIC 5:-** Important mineral resources of Sikkim and Delhi.

**TOPIC 6:-** Eco-Efficient approaches to land management in Sikkim and Delhi.

**TOPIC 7:-** Waste disposable system adopted by Sikkim as compared to Delhi.

**TOPIC 8:-** Availability of food resources in Sikkim and Delhi.

Do a thorough research on the assigned topic. Members of the same group, can discuss with each other on how to report different content, and still appear as if they have joined two aspects together.

### HOW TO REPORT?

**Step 1 :-** Roll No 1 will begin with the topic assigned to him/ her. Report your topic just as a reporter would do. Make it interesting using some slides or flashing images at a screen behind you. Creativity is all yours.

**Step 2 :-** Once done reporting, you'll end your video as if you're passing the Mic to the next Reporter *i.e.*, Roll No 2.

**Step 3 :-** Similarly you'll continue this Mic challenge until it reaches the last member of your group.



# ART INTEGRATION

**Step 4 :-** Each member will be filming his / her video individually at your homes. So at the end you'll have 8 videos. One person of the group will then club these 8 videos into ONE single video and mail it to the concerned Teacher. Total time of each video should not be more than 10 minutes i.e each student in a group will get maximum of 1 minute time.

### DON'T FORGET TO

- **Wear Formal Clothes**, as you are a Reporter (A video done in Casuals/ Fancy Clothes will attract Negative Marking. You can wear your school uniform too. But keep a symmetry.)
- **Avoid repetition of content within the same group** i.e children with same topics ,in one group, should not be seen giving the same content on the topic assigned. So please communicate before you start recording your video.
- **Mention your Name, Class/Sec and Roll No at the end** with a sentence like" This is Reporter ABC of class XB Roll No 45", or any other line you feel.

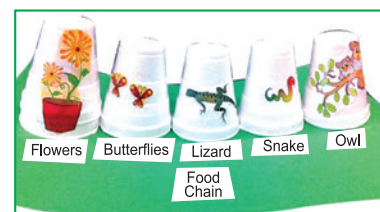
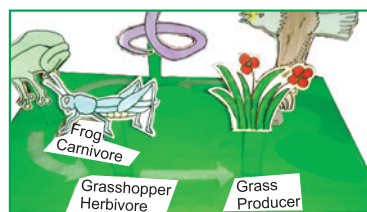
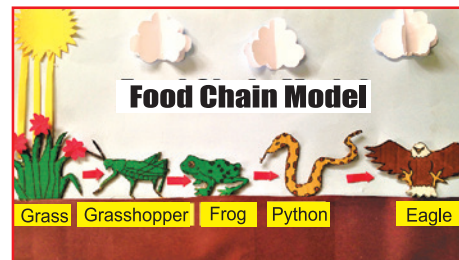
### Learning Outcomes

- They will enhance their creativity
- They will maintain cleanliness by eco-friendly solutions

### Self -Evaluation/ Follow up

- Student can tell teacher about the activity they enjoyed the most and they can express their opinion on the performed activity.
- They can collect the picture of animals and construct a food chain/food chain depicting their trophic level.
- They can also construct a pictorial food chain/food web.

### Ideas

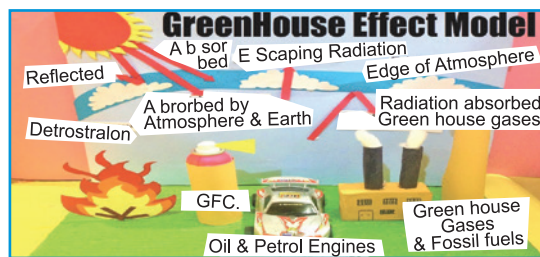




# ART INTEGRATION



## Stop Global Warming



## Resources/Links



3 D Model of Food Chain



Ozone Layer Model