### APPENDIX III

**SAMPLE LESSON PLAN - 1**

<table>
<thead>
<tr>
<th>Topic:</th>
<th>Digestion in ruminants</th>
</tr>
</thead>
</table>
| **Resources:** | 1. Text Book  
2. Animated video of amoeba and ruminant nutrition from [www.makemegenius.com](http://www.makemegenius.com)  
3. |
| **Objectives/Teaching Points:** | 1. To classify different modes of nutrition  
2. To understand the importance of nutrition in various organisms.  
3. To explain nutrition among ruminants  
4. To discriminate the nutrition in macro and microorganisms. |
| **Brain-based Principles:** | **Principle:** Meaning is more important than just information.  
**Application:** 1. An activity related to the meaning.  
2. An experience can be shared.  

**Principle:** Learning involves focused attention and peripheral perception.  
**Application:** Attention can be gained by  
1. Providing actual live situations related to the topic.  
2. Live video of the feeding cow was shown as it was noe feasible to take them near animals.  

**Principle:** We understand best when facts are presented in their natural environment.  
**Application:** Students can be taken out for small field trips to provide natural environment |
| **Development:** | Teacher would ask students why cows keep on chewing for longer period of time. Teacher would perform following activities to explain nutrition in ruminants for the development of the lesson:  
- Define ruminants  
- Give examples of ruminants.  
- Live video of digestion in ruminant (cow) |
| **Elaboration** | Students would discriminate nutrition in ruminant cow and human beings by explaining the process. |
| **Practice:** | Students will draw the diagram of digestive system of cow. |
| **Accommodations:** | Students would check the labeling and diagrams of the each other. And teacher will finally cross check the matter. |
| **Checking For Understanding:** | Teacher will draw the diagram on board and ask students on random basis to come and label the part named by the teacher. |
**Closure:**

Students are asked to Compare and classify the various modes of nutrition of previous class also.

**Actual Procedure Followed:**

After greeting the students teacher asked students have they seen cows around them ever? Teacher asked whether any of students have observed how does a cow eat grass? Students came up with different answers like chewing and eating for long time etc. teacher later explained why cows chew food for longer period. Teacher asked the students about the example of glucose rich food. Teacher explained that due to higher amount of fiber in the food, cows stomach has rumen that stores the food swallowed. This food is later sent back into mouth in parts for proper chewing and formation of cud. To explain digestion in ruminants a video was shown in which digestion of food in ruminant has been explained. The class was very much involved in looking to the video. Students were asked questions by drawing diagram on board and asking functions of various parts of ruminant digestive system.

**Introspection**

An outside trip could have been arranged to show live field or Gaushala where cows are grazing. However students enjoyed the live video film showing digestion in ruminants.

**Feedback**

Students explained that they were willing to visit gaushala for watching the eating process in cows. However that was shown with the help of video as it was not feasible to take such young students to that place.

**Home assignment:**

Paste the pictures of different organism and mention their mode of nutrition.
### SAMPLE LESSON PLAN - 2

<table>
<thead>
<tr>
<th>Topic:</th>
<th>Respiration in human beings</th>
</tr>
</thead>
</table>
| Resources: | 1. Text Book  
2. Waste water bottle  
3. Balloon  
4. Rubber barrier  
5. Animated video |
| Objectives/Teaching Points: | 1. To enable students know about different parts of respiratory system.  
2. To describe the process of respiration in human beings.  
3. To explain the working of respiratory system in human beings.  
4. To discuss the role of different parts in human respiratory system. |
| Brain-based Principles: | **Principle:** The human brain act as a parallel processor of information.  
**Application:** 1. the students were shown the video clips  
--- Side by side theoretical explanation was made.  
**Principle:** Human brain loses its capacity to retain new information under threatened conditions.  
**Application:** students made a working model from waste material.  
--- Teacher assisted the students work.  
**Principle:** Human Brain has a tendency to learn consciously as well as unconsciously.  
**Application:** A quiz was held in the end of the lesson. |
| Development: | Teacher would perform following activities to discuss the respiratory system in human beings:  
--- Teacher would explain the process of respiration in human beings.  
--- For better understanding of the concept of respiration, an animated video showing all the parts of respiratory system and working would be shown.  
--- A working model of respiratory system in human beings would be formed with the teachers assistance. |
<p>| Elaboration | Students would develop a model explaining the function of human respiratory system. |
| Practice: | Students will draw the diagram of human respiratory system. |
| Accommodations: | Students would explain the role of different parts of human respiratory system. |
| Checking For Understanding: | A quiz would be held after the end of the lesson and winning team shall get a prize. |</p>
<table>
<thead>
<tr>
<th><strong>Closure:</strong></th>
<th>Teacher would tell about respiration in fishes in brief.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Actual procedure</strong></td>
<td>After greeting the students, teacher will explain the process of respiration to students with breathing exercise. A video was shown to students for explaining the working of human respiratory system. Students were also told to bring some waste material for making a working model of human respiratory system. The working model was made by students with teachers assistance. However the rubber barrier used in the working model was not an effective one, still the model was used to explain the working.</td>
</tr>
<tr>
<td><strong>Introspection</strong></td>
<td>Students assisted teacher in making the working model of the respiratory system. Some sort of mismanagement was observed while making the model. The students should be given independence to perform the task by themselves.</td>
</tr>
<tr>
<td><strong>Feedback</strong></td>
<td>Students enjoyed the working of respiratory system through model made out of waste matter.</td>
</tr>
<tr>
<td><strong>Home assignment:</strong></td>
<td>Discuss the role of lungs in the process of respiration.</td>
</tr>
</tbody>
</table>
## SAMPLE LESSON PLAN - 3

<table>
<thead>
<tr>
<th>Topic:</th>
<th>Parts of flower</th>
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</thead>
</table>
| **Resources:** | 1. Text Book  
2. Chalk Board  
3. Seating Chart  
4. Group work  
5. Live specimens of bougainvillea flower |
| **Objectives/Teaching Points:** | • To enable students discriminate different parts of flower  
• To understand vegetative and reproductive parts of flower  
• To draw the diagram of flower and its parts  
• To label different parts of flower |
| **Brain-based Principles:** | **Principle:** Humans’ search for meaning is innate.  
**Application:** To make the topic meaningful and interesting teacher will ask students about the most attractive part of a plant. Later teacher will come to parts of flower.  
**Principle:** The search for meaning comes through patterning.  
**Application:** 1. Teacher will show the live bougainvillea flower  
3. Teacher will perform the dissection of flower to students  
3. Explanation will be made side by side.  
**Principle:** Complex learning is enhanced by challenge and inhibited by stress.  
**Application:** teacher will put students to a challenging situation by making collaborative groups with different role to every student and ask them to:  
Label different parts of flower and Explain the role of different parts |
| **Development:** | The teacher will start with asking students which part of the plant appeals most attractive to them. After getting the responses, the teacher will use following brain based strategies:  
• Dissect the flower specimen  
• Draw the diagram of flower and label its different parts.  
• Explain the functions of different parts  
• Students will perform the same task |
<p>| <strong>Elaboration:</strong> | Teacher would ask students about the fruits and their importance in life. |
| <strong>Practice:</strong> | Students will draw the diagram of parts of flower on their note books and team leader will check the work and submit it to teacher. |</p>
<table>
<thead>
<tr>
<th>Accommodations</th>
<th>Teacher will ask name of different flowers around the students environment.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Checking For Understanding:</td>
<td>Students will be asked to make groups for the collaborative approach. Students will perform the dissection themselves and the leader will check and finally submit it to the teacher.</td>
</tr>
<tr>
<td>Closure</td>
<td>Teacher would ask the students to label the diagram of parts of flower.</td>
</tr>
<tr>
<td>Actual Procedure Followed:</td>
<td>Teacher greeted the students first of all. To relate the topic to daily life and make it meaningful for their lives teacher will relate the topic the nature around them. Teacher will ask them which part of plant seems most attractive and beautiful to them. Teacher will ask students to name different parts of a flower. To provide this knowledge teacher will perform the dissection of live specimen of bougainvillea flower and ask students to carefully observe. To make the understanding better and make pattern in learning teacher will ask students to sit in groups as per arrangement and perform the dissection. All the groups collaboratively would dissect the parts and name them. In the end teacher will cross check the diagrams.</td>
</tr>
<tr>
<td>Introspection</td>
<td>Teacher was able to make the necessary arrangements on getting live flowers for classroom management. Students were excited to perform the dissection as it was relatively a new term to them. Self-discipline was observed while the group activity. Students were more involved when they were doing the task themselves. A sense of freedom was felt by students as they were more comfortable in group work.</td>
</tr>
<tr>
<td>Feedback</td>
<td>Students were very enthusiastic to know about the dissection of flower. They were very much comfortable in performing the task in a social group. They labeled the diagram well and told that they feel more independence in this manner.</td>
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<tr>
<td>Home assignment:</td>
<td>Draw neat and colorful diagram of parts of a red rose flower.</td>
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