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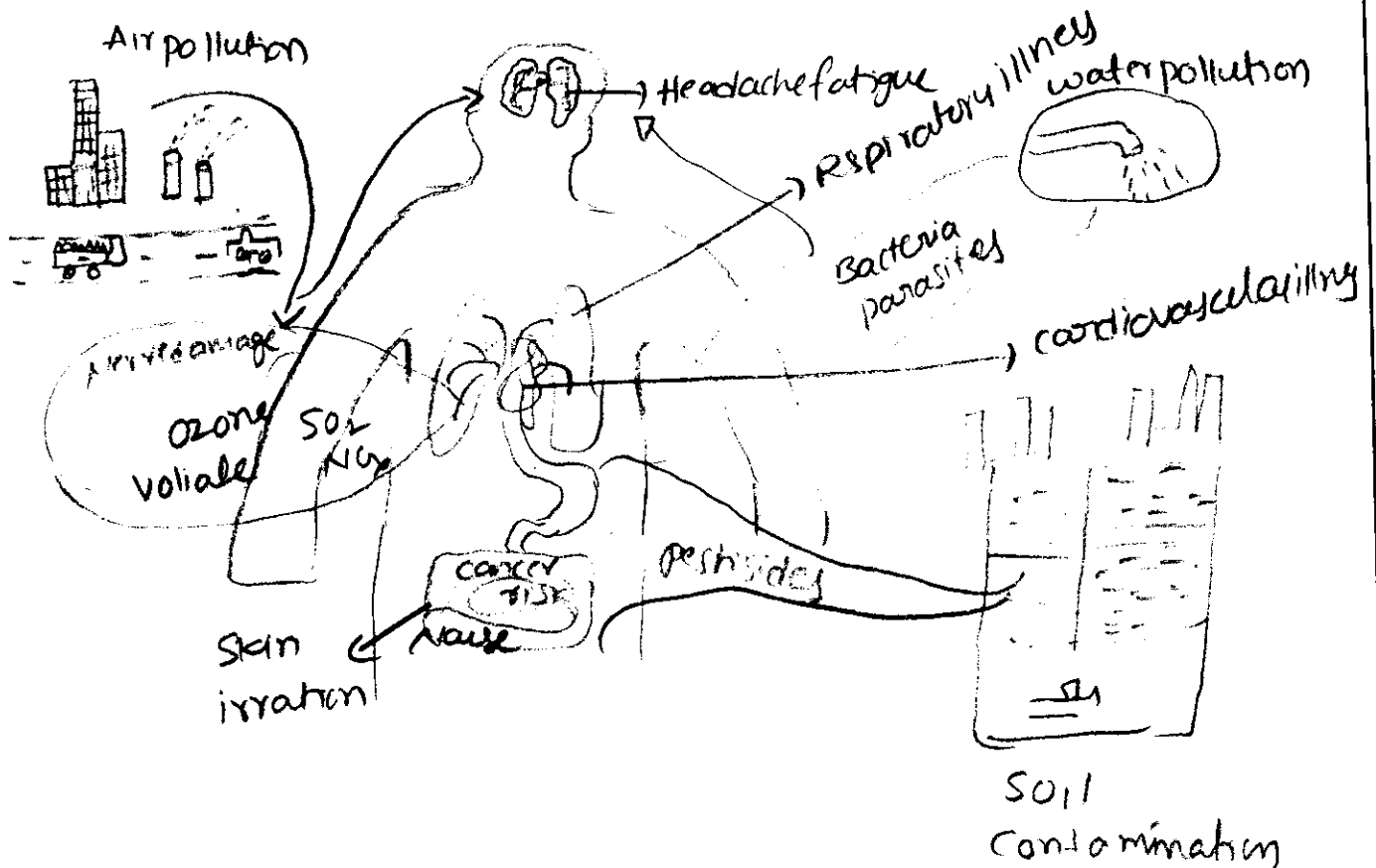
# Activity-1

Make a survey on the problems of environments pollution in your Locality and record the observations and submit a report?

## INTRODUCTION:-

Visakhapatnam is growing fast into a metropolitan area. The city houses an efficient IT Hub, with a lot of industries, day-by-day increasing traffic, and has a population of 17,30,320 as per the census of 2011. It has also got a huge residential potential.

### Health effects of pollution





Air quality improvement programs and climate protection policies are mutually dependent and symbiotic and beneficial to the environment, ecosystems and hence to human beings. Air pollution and climate change influence each other by complex interactions in the atmosphere and hence have repercussions for each other.

Environmental pollution and Impacts on public Health;

Implications of the Tarluwada municipal Dumping site in visakhapatnam Report:-

Over the last three decades there has been increasing global concern over the public health impacts attributed to environmental pollution, in particular the global burden of disease. The world health organization estimates that about a quarter of the diseases facing mankind today occur due to prolonged exposure to environmental pollution.

A medical camp was set up at the KKR Growtham school that is located next to the dumpsite. A total of 328 children and adolescents living and schooling adjacent the dumpsite examined various ailments.





# flow chart of public-health effects brought about by environmental pollution emanating from waste Dumping site

## Tarlwada waste dumping site

- Industrial waste e.g. fallout or unused chemical and raw materials, expired products and substandard goods.
- Agriculture waste e.g. pesticides
- Hospital waste e.g. packing materials and material and containers used syringes and sharps biological waste and pharmaceuticals

## Environmental pollutants

- Heavy metals e.g. lead mercury cadmium, arsenic, chromium, zinc, nickel and copper.
- persistent organic pollutants e.g. aldrin, dieldrin, dichlorodiphenyl trichloroethane (DDT), endosulfan, heptachlor, toxaphene, chlordane, hexachlorobenzene and polychlorinated

## Public health effects

- \* skin disorders - fungal, infectious, allergic, dermatitis, psoriasis and skin cancer.
- \* Ear infections
- \* Dental disorders

## Routes of Exposure

- Inhalation - movement of air from the external environment through the airways always during breathing.
- Indigestion.





## Activity - II

select any topic of your choice and prepare a lesson plan on the lines suggested in constructivist approach.

Introduction:- Now a days "constructivist approach" is widely used by the educationist in india and abroad. National curriculum frame work 2005, published by NCERT lays lot of emphasis on this approach.

strategies for implementing a constructivist lesson  
by yagar (1991)

starting lesson:-

ask questions

consider possible responses to questions

Note unexpected phenomena

Identify situations where student perceptions vary

observe surroundings for points for questions

continuing the lesson:-

Engage in focused play

Brainstorm possible alternatives

look for information

experiment with material

observe specific phenomena.



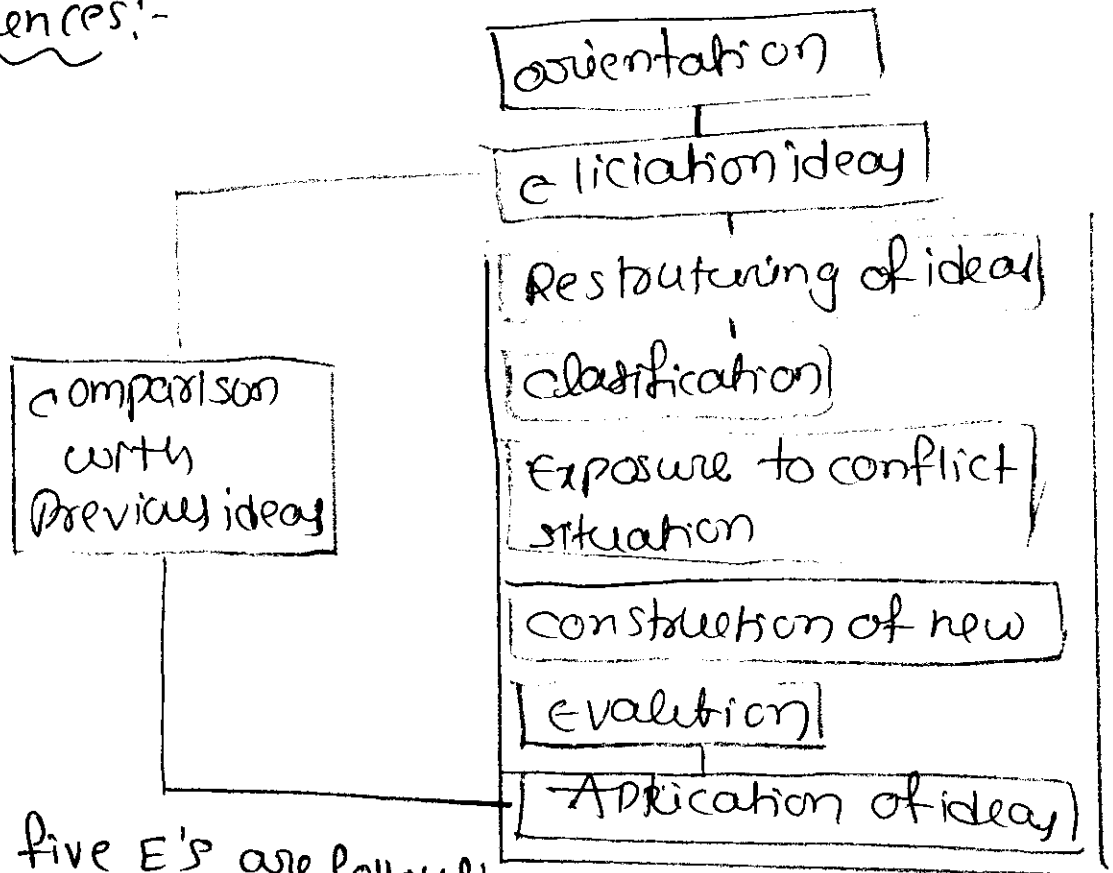


Proposing explanation of solutions:-

- communicate information and ideas
- ⇒ construct and explain a model
- ⇒ construct new explanation

Taking action :- Take decisions  
 → Apply knowledge.

Figure below provide a look at the constructivist teaching sequences:-



The five E's are follows:-

1. Engage
2. Explore
3. Explain
4. Elaborate
5. Evaluation





## Constructive SE Lesson plan format:-

### Preliminaries:-

Name of the Teacher :-

Name of the school :-

Material required :- images, pictures

subject : Biological science

Topic : Our food

class : VI

### Essential knowledge and skill:-

He would be able to differentiate the different items.

### Lesson objective

Conceptual understanding:- It all about what type of food we eat and what is the use of taking food.

### Questioning and Reinforcement:-

The child will be able to think of any dish

S.No	Steps	Activities
	<p><u>Engage:-</u> good morning children The summary and tough words related to that topic should be written on the board</p> <p><u>Announcement:-</u> of topic:-</p> <p><u>Expose:-</u> Read pg: 7 and make the student read the topic underline through words.</p> <p><u>Explain:-</u> should ask children about more through words.</p> <p>Preparation : process of making.</p> <p><u>Elaborate:-</u> child read the activity - I</p> <p><u>Evaluate:-</u> Discuss with the children regarding activity - IV</p> <p>* Name of preservation * why are store long time.</p>	<p>Good morning Teacher, children answers to written on board</p> <p>Teacher should announce the topic "our food"</p> <p>Preparation, Turmeric</p> <p>Raw lemon ↓ wash &amp; clean with water ↓ add salt &amp; oil ↓ store for 2 days</p>





## Activity - III

Prepare laboratory instructional cards for any two experiments of your choice?

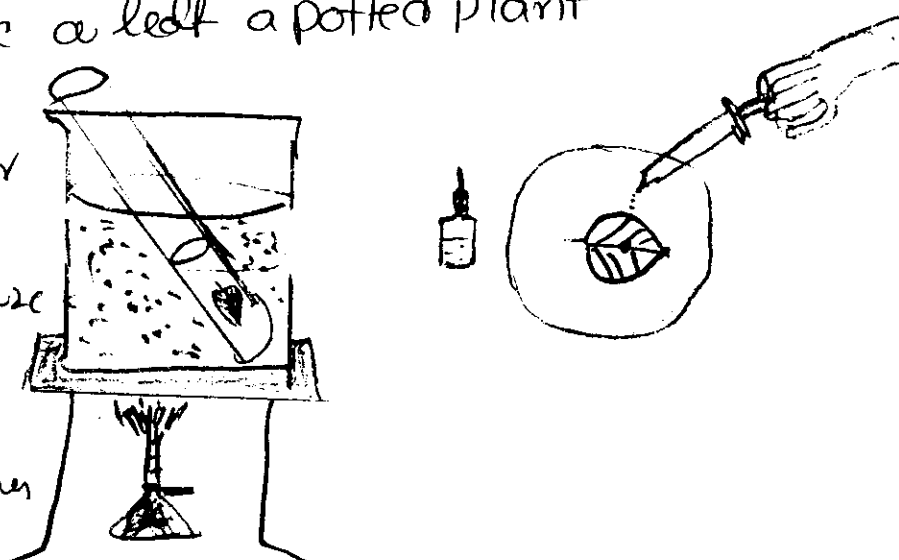
Experiment:- laboratory instructional card  
presence of starch in leaves.

class:- 10th class

experiment:- presence of starch in leaves.

Let us take a leaf a potted plant

- Beaker
- Boiling water
- leaf
- ethanol
- asbestos gauze
- tripod stand
- boiling tube
- bunsen burner



Boil the leaf in methylated spirit over a water bath till it becomes pale - white due to the removal of chlorophyll. observe the leaf

What do you see?

The presence of starch will be indicated by - blue-black. Do you think solar energy transforms into chemical energy by the process of photosynthesis.

Materials essential for photosynthesis:-

What are the materials that you think would be essential for the synthesis of carbohydrates





in the process of photosynthesis.

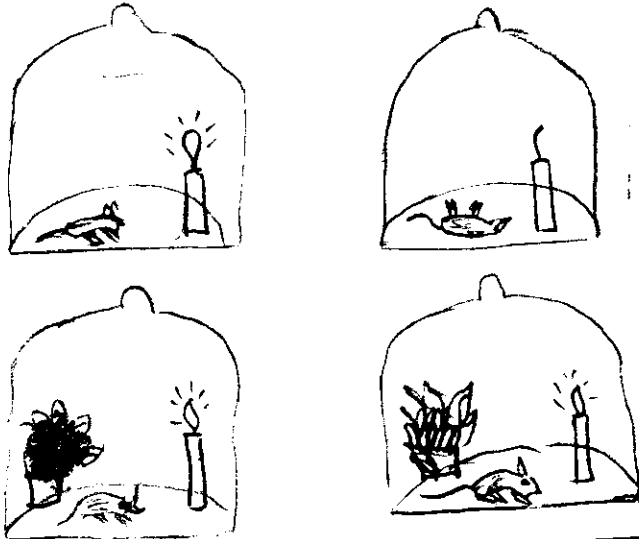
Let us study how scientists worked to find out about some of the materials required for process of photosynthesis.

Water and photosynthesis:-

class VII we had already studied how Helmont found that water was essential for increase of plant mass. He did not know about photosynthesis then. It was later found that increase in plant body mass or material occurred due the process of photosynthesis.

Air and photosynthesis :-

Let us discuss a simple experiment about photosynthesis we have studied some other in our earlier classes. This one helps to find out about the role of air in process of photosynthesis. It is interesting to learn find about experiment which was one of the several milestones in gradual development of understanding of photosynthesis.





Let us discuss - Joseph Priestley (1732-1804) in 1770 performed a series of experiments that revealed the essential role of air in the growth of green plants. Priestley you may recall discovered oxygen in 1774. Priestley observed that a candle burning in a closed space, a bell jar, soon gets extinguished similarly a mouse would soon suffocate in closed space of bell jar. He concluded that burning candle or animal both somehow damage air. But when he placed a mint plant in the same bell jars, he found that mouse stayed alive and the candle when lighted from outside continued burning in the presence of the mint plant. Priestley hypothesized as follows plants restore to air whatever breathing animals and burning candles remove.

How did he light the candle from outside?

Priestley experiment confirms that gases exchange was going on plants were giving out gas that supported to burning and essential for survival of animals.





## Activity 13

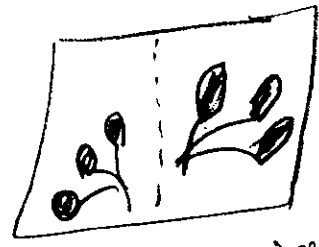
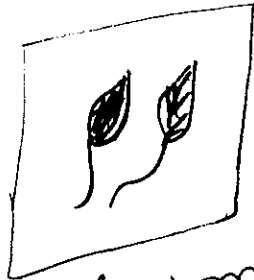
Prepare a Herbarium based on a certain Theme.

### THE HERBARIUM :-

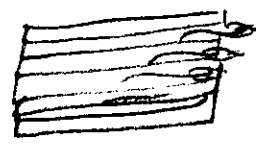
The another activity is that can be prepared by the child under the guidance of teacher. when ever there is field trip the children used to collect plant of rare type. The selected part of plant should consistant of details of the different parts like, flowers, fruits, and any other special features of plants identified placed then the middle of new papers or old books or blotting paper. They are to be changed everyday so that they are dried. Then the place dried twig over the herbarium sheet fix them properly either with cellophane & or gum. At the bottom sheet we have to write the name of the plant its scientific name, place where it is collected its family species name, etc..

These activity are very much useful to the teacher while explaining some of the important aspects of lesson without going to outside. The children better idea and what ever doubts that are mind children clarified.





Herbarium specimens of various Japanese plants



Drying

Pressing:-

- Plant press
- News paper
- Grey proof
- Blotting paper
- Corrugated card

Herbarium label

Scientific name:

Vernacular name:-

Collector name and specimen number.

Date of collection

Locality.

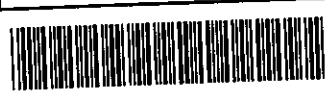
Habitat

Habit:-

Characteris:-

Mechanical uses!

Storage: storage in a large A<sub>3</sub> paper or card with members of each genus being kept together.





## Activity - V

Analyze the recent public examination & class Biological Science question paper and compare with the pre-final question paper and record your observation

Introduction:- evaluation is related a new term in education vocabulary. It is wider concept than testing measurements and supposed to judge the work of the educational outcomes. brought about result teaching learning process.

Comparison between Xth Board examination question paper to prefinal paper:

prefinal examination

S.No.	objectives	No. of Question	marks	%
1.	Knowledge	7	7½	30
2.	Understanding	5	9	36
3.	Expression	3	4	16
4.	Appreciation	3	4½	18
TOTAL		18	25	100

weightage to objectives

S.No	Objectives	No. of Question	Marks	%
1.	Knowledge	6	6½	26
2.	Understanding	7	12	48
3.	Expression	3	4	16
4.	Appreciation	2	2½	10
TOTAL		18	25	100





### weightage to content

S.L. No.	Content	No. of Q.	Mark	%	S.L. No.	Content	No. of Ques	Mark	%
1.	Nutrition	2	1	4	1.	Natural Resources	2	4	16
2.	Respiration	5	9	36		Respiration	3	8	32
3.	Transpiration	3	3	12	2.	Transpiration	2	2 1/2	10
4.	Co-ordination	2	3	12	3.	Co-ordination	3	1 1/2	8
5.	Heredity	3	5	20	4.	Heredity	2	3 1/2	6
6.	Our environment	1	1	4	5.	Our environment	3	1/2	14
7.	Excretion	1	1	4	6.	Excretion	1	1/2	2
8.	Reproduction	1	2	8	7.	Reproduction	2	3	12
TOTAL		18	25	100	TOTAL		18	25	100

### weightage to type of questions

S.L. No.	Difficulty Level	No. of Ques	Mark	%
1.	Essay	1	5	20
2.	Short Answer	6	12	48
3.	V. Short Answer	5	5	20
4.	Objective	6	3	12
TOTAL		18	25	100

S.L. No.	Difficulty Level	No. of Ques	Mark	%
1.	Essay	1	5	20
2.	Short Answer	6	12	48
3.	V. Short Answer	5	5	20
4.	Objective	6	3	12
TOTAL		18	25	100

### weightage to Difficulty Level.

S.L. No.	Difficulty Level	No. of Ques	Mark	%
1.	Difficult	1	5	20
2.	Average	7	7 1/2	32
3.	Easy	10	12 1/2	48
TOTAL		18	25	100

S.L. No.	Difficulty Level	No. of Ques	Mark	%
1.	Difficult	1	5	20
2.	Average	6	7	28
3.	Easy	11	13	52
TOTAL		18	25	100





## BLUE print - Xth Board

Sl No	Content	Knowledge				Understanding				Expression				Appreciation				No	M	T.
		E	SA	VSA	O	E	SA	VSA	O	E	SA	VSA	O	E	SA	VSA	O			
1.	Nutrition								2(1)									2	1	4
2.	Respiration		1(2)	1(1)	2(1)	1(1)												5	9	36
3.	Trans-formation				1(1)									1(2)	1(2)	1/2		3	3	12
4.	Coordination								1(2)	2(2)								2	3	12
5.	Heredity							2(1)	1(1)									3	5	20
6.	Our environment				1(1)			1(1)												
7.	Excretion																	1	1	4
8.	Reproduction									1(1)								1	1	4
TOTAL			6(6)	1/2				7(2)		3(4)				1/2	1(1/2)			18	25	10

