

# 25<sup>TH</sup> NATIONAL CHILDREN'S SCIENCE CONGRESS-2017

Focal Theme for 2016 & 2017  
Science, Technology & Innovation  
for Sustainable Development

# Criteria of Good Projects

- Proper understanding and definition of the problem undertaken.

Before you can solve a problem, you have to understand the problem.



Listening is the first step in understanding.

# Criteria of Good Projects

- Quality and quantity of work, including team work, learning process, subject understanding and efforts to validate the data collected.



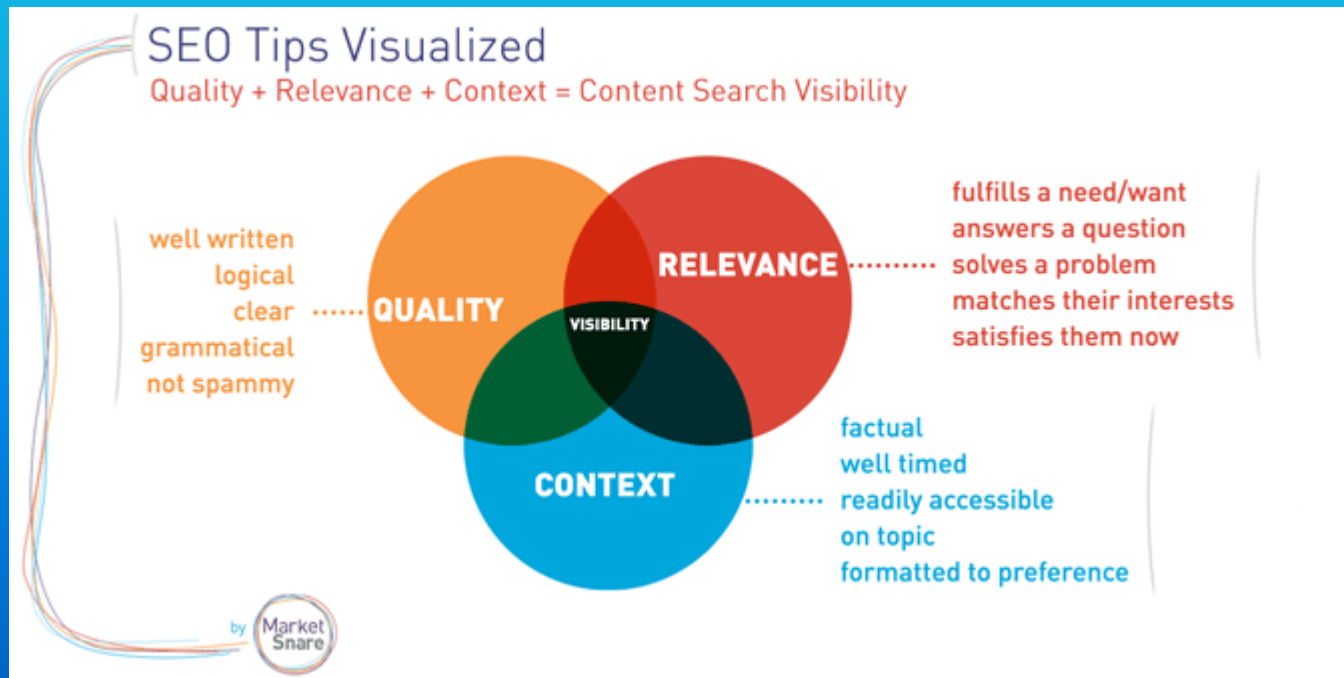
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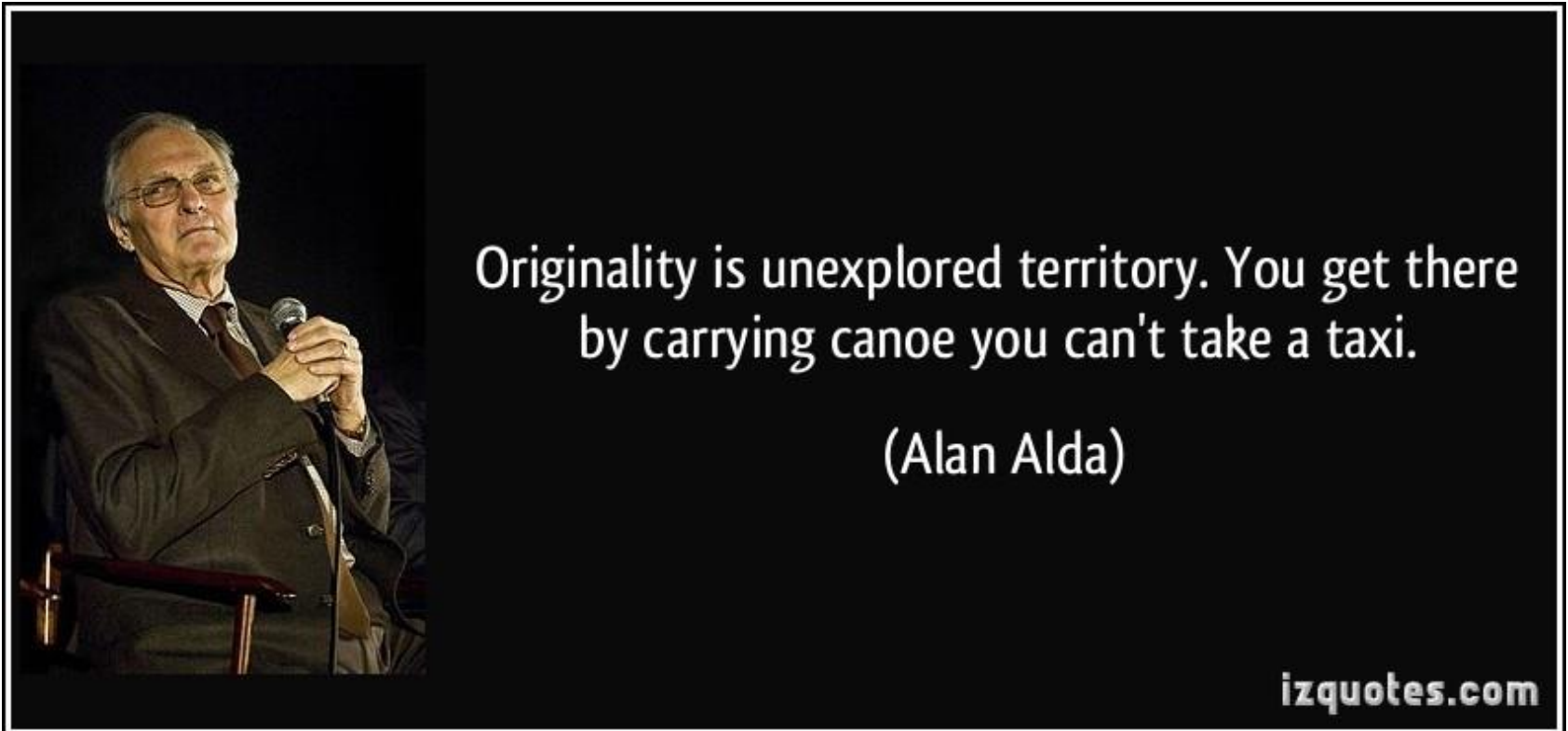
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Originality, innovation and creativity shown to understand the problem and find solution i.e. in methodology and experiment design.



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Originality is unexplored territory. You get there by carrying canoe you can't take a taxi.

(Alan Alda)



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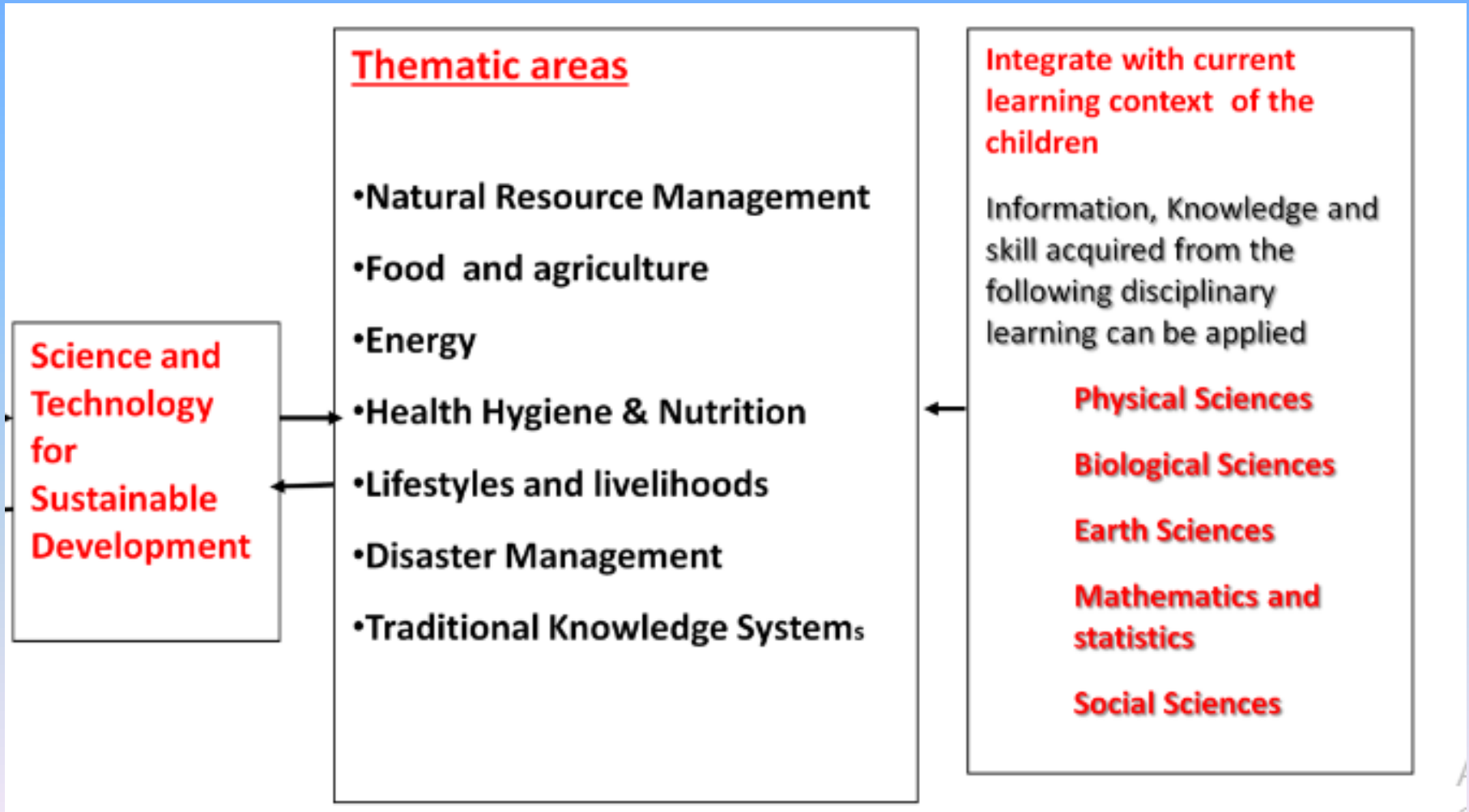
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# SMART approach

- **S**:Specific: The subject/issues of study must be specific.
- **M**:Measurable: The issues of study must be measurable in quantitative /qualitative forms so that component of comparability is maintained.
- **A**:Appropriate: The topic must be appropriate to the focal theme and sub themes, along with field study area, methodology must be appropriate to nature of the issues considered for the study.
- **R**: Realistic: The issues of the study must be realistic along with the methodology adopted for the purpose.
- **T**:Time bound: Study must be carried out in a limited time frame. The project activities may not destabilize normal activity /schedule of the child

# FOCAL THEME FOR 2016 & 2017



# WHAT SHOULD BE OUR OBJECTIVE

- OUR OBJECTIVE IS TO BE ABLE TO DECIDE **WHAT ASPECT/PARAMETER OF WEATHER OR ITS MANIFESTATION(S) WE WANT TO OBSERVE/MEASURE/UNDERSTAND/PREDICT.**
- DECIDE **WHAT METHODS** WE SHOULD ADOPT FOR THIS PURPOSE.
- DECIDE ON **INSTRUMENTS** WE COULD USE/BUILD FOR THE ABOVE PURPOSE.
- **REPORT/RECORD** OUR OBSERVATIONS/MEASUREMENTS.
- **ANALYSE** THE DATA WE GATHER.
- **PREDICT** WHAT MIGHT HAPPEN IN THE FUTURE.

# The components/ parameters/ aspects that could be studied are:

- **Temperature [ maximum, minimum, average]**
- **Atmospheric pressure**
- **Wind Speed and wind directions**
- **Relative Humidity**
- **Clouds**
- **Quantum, Intensity and Frequency of Rain**
- **Lightning, thunder, rainbow**
- **Tides [in coastal regions]**
- **Water level [in wells, ponds]**
- **Evaporation from surface water**
- **Fog, mists and smog and dew**
- **Response of Plants and insects to weather**
- **Predicting weather from plants and animal behavior**
- **Emergence of diseases**



# **NATURAL RESOURCE MANAGEMENT**

## **FOREST RESOURCE:**

- Lot of afforestation program being carried out.**
- Trying for 33% forest cover of the geographical area.**
- Still only we have 24% forest cover as per 2015 survey.**



# NATURAL RESOURCE MANAGEMENT

## FOREST RESOURCE:

- problems associated with less forest cover. (green house effect, pollution, climate change etc.)

- when will we achieve 33 % forest cover.

- where is afforestation done.

The India State of Forest Report (ISFR) 2015 states that the majority of the increase in forest cover has been observed in open forest category mainly outside forest areas not in Very Dense Forest area.



# **NATURAL RESOURCE MANAGEMENT**

**Open Forest area has increased by 4, 744 sq km, which is 9.14 % of the geographical area.**

**The area under Very Dense Forest has increased by 2, 404 sq kms, which is 2.61% of the geographical area.**



# **You can do a PROJECT on the impact of mass tree plantation program.**

**Projects based on.....**

- Rate of success in your locality.**

**Select few places where mass tree plantation is done in your area in the past five years.**

- How many numbers of plantation has been done.**
- How many types of trees planted, how many survived after 1 year,2 year,3 year,4 year & 5<sup>th</sup> year.**
- What is the average rainfall for the year.**
- Was it fenced etc.**







# **You can do a PROJECT on the impact of mass tree plantation program.**

- Identifying the successful tree variety for your locality.**
- Different techniques to protect the plantation.**
- Different techniques to irrigate the plantation.**
- Finding out new successful tree growing techniques.**



# Growing a tree in 90 days – Simple technique by Mr.Arjunan from Tirunelveli

Posted by [Sathish](#) on [May 17, 2016](#) in [General Farming Articles](#)

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Mr.Arjunan from Tirunelveli is a very inspiring person and TWA team salutes his effort to make the nation more greenery. He has planted more than 35,000 trees across Tamil Nadu, and he wants to plant thousands more. "Our aim should be to green the State enough to restore its ecological balance, its rainfall. We should not have to beg other States for water," Greening Tamil Nadu is Arjunan's only dream. "Once I do that, I am ready to die," he says.

He also teaches the technique of growing a tree in just 90 days. (tree propagation using 'cuttings')

This is how it is done

Pack soil tightly into a sack that is at least one-and-a-half-feet long. Allow it to stand for two days. There should be no air pockets in the bag of soil.

Choose a branch that is at least six feet long

Ensure the portion where it has been lopped off is not damaged



The branch has to be watered every day. One litre of water a day is all that it takes. Cool water should fall like rain on the branch from the top, and not directly into the soil.

Protect from direct sunlight. An overhead net or even a simple sari will filter at least 50 per cent of the sunlight. After 45 days, the plant can be put out in the sun. In 90 days it is ready.

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- ▶ Pack soil tightly into a sack that is at least one-and-a-half-feet long. Allow it to stand for two days. There should be no air pockets in the bag of soil.**
- ▶ Choose a branch that is at least six feet long**
- ▶ Ensure the portion where it has been lopped off is not damaged**
- ▶ Soften the soil with water and gently lower the branch into it. Pack soil tightly around the base.**
- ▶ The branch has to be watered every day. One litre of water a day is all that it takes. Cool water should fall like rain on the branch from the top, and not directly into the soil.**
- ▶ Protect from direct sunlight. An overhead net or even a simple sari will filter at least 50 per cent of the sunlight. After 45 days, the plant can be put out in the sun. In 90 days it is ready.**

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# WATER RESOURCES & DISASTER MANAGEMENT

Project on ....

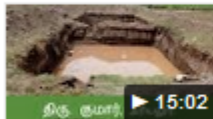
Assessment of Local water bodies.

Depth from ground level year wise.

Height of pond boundaries from the ground level.

Study on pannai kuttai in your locality.(Rain water harvesting)

குமார் / அரியலூர் / பண்ணைக்குட்டை ...



<https://www.youtube.com/watch?v=p5buuSDFbkE>

Dec 6, 2016 - Uploaded by Uyirnaadi Vivasayam

திரு. குமார், அரியலூர். பண்ணைக்குட்டை பற்றிய அனுபவம்  
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15:02

# **WATER RESOURCES & DISASTER MANAGEMENT**

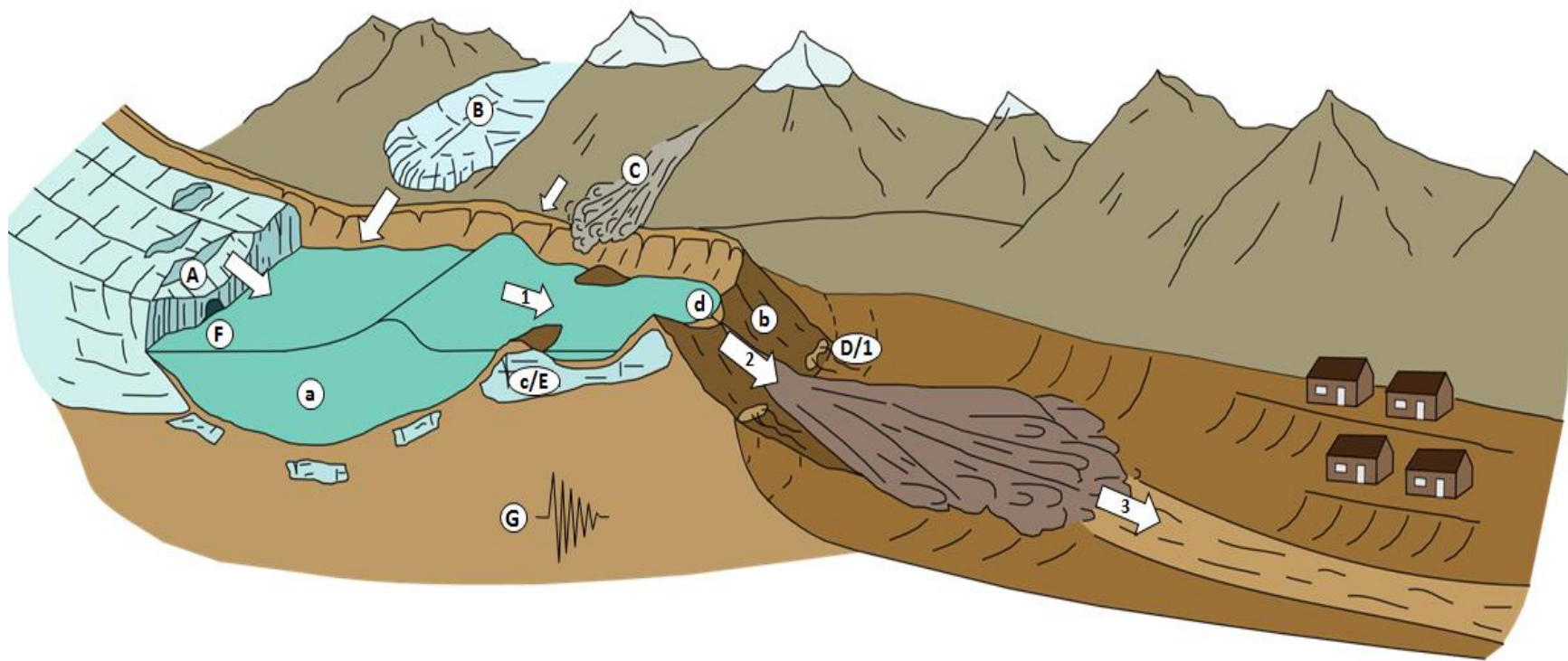
**Ground water level year wise .  
Annual average rainfall.**





# How we can avoid breaching of water bodies







# FOOD AND AGRICULTURE

- Designing of new low cost instruments for agriculture purpose.(plucking fruits)





Should be simply clever...







# Think for...

- Papaya.

Should be easy and  
fast to operate.



Guava .



- Drum stick



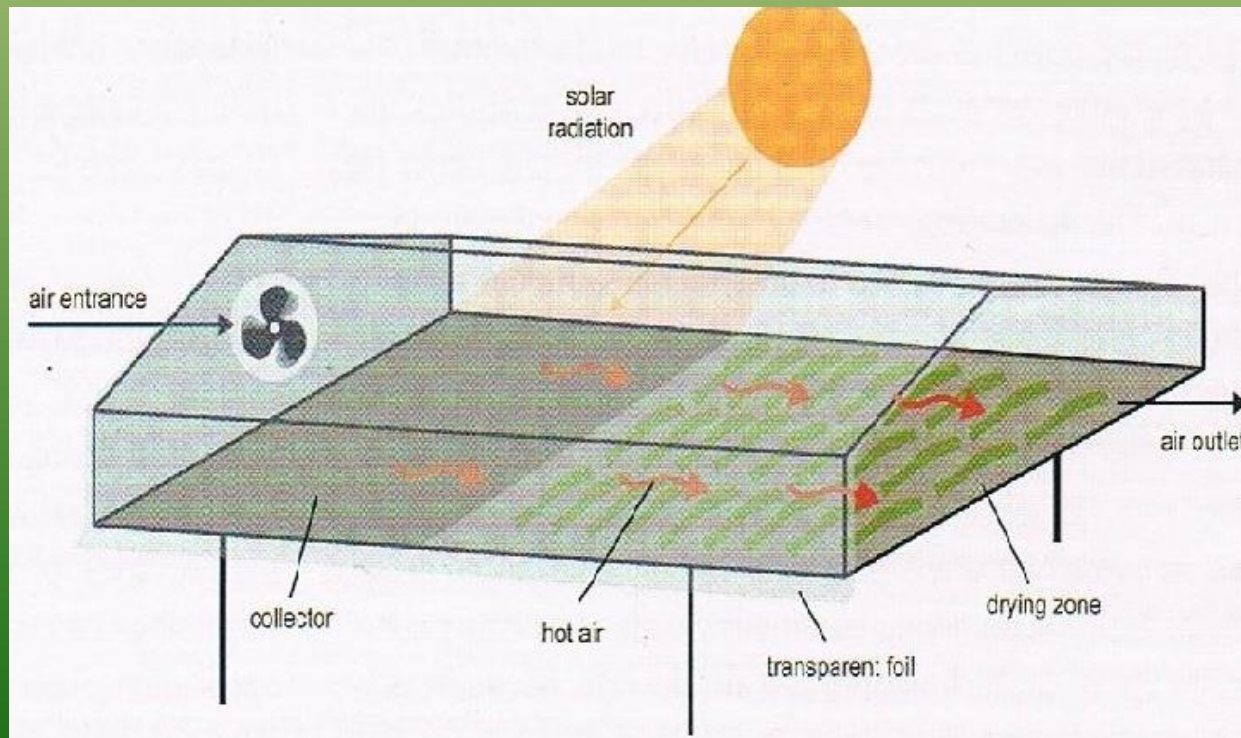
- Jamun



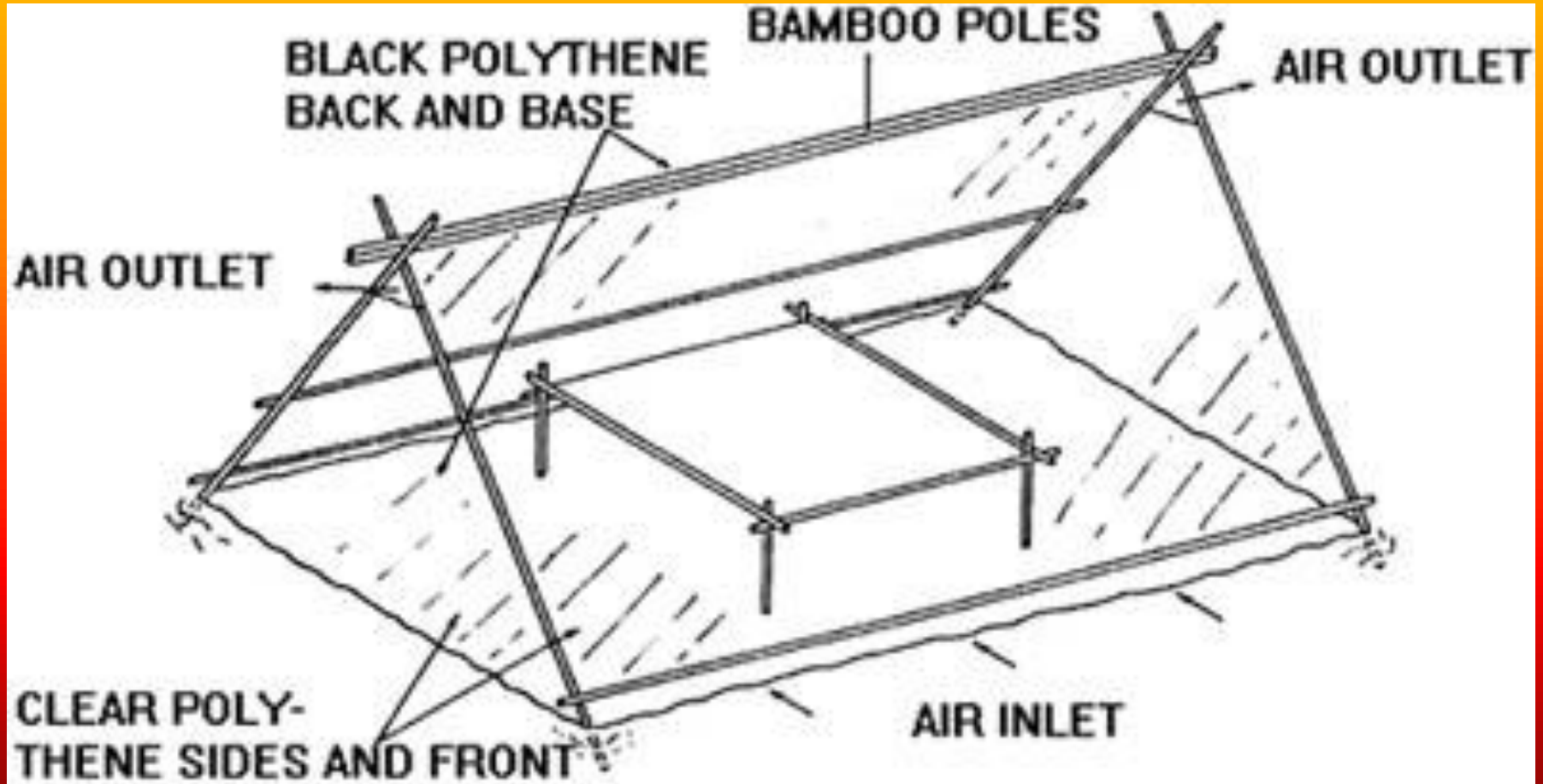


# FOOD AND AGRICULTURE & ENERGY

- Solar energy for food processing
- Solar dehydration of agriculture products.



# Project on designing of low cost dryer





# Things to be understood

- Key to effective drying (dehydrating ) is understanding conduction ,convection & radiation of material used for construction.
- Continuous removal of humidity inside the dryer.
- Identifying the agricultural products in your locality that can be processed .

