### **Environmental Education (31)**

Environmental Education subject is mandatory for the standard 11th and 12th - Arts, Commerce, Science. Students of class 11th and 12th are required to prepare project report in writing during each academic year.

### **Guidelines for writing project report**

- It is mandatory for the students to write project reports according to the following guidelines.
- A reference list of project topics is provided in the textbook.
- Evaluation of Project work should be according to the guidelines.

# **1.** Selection of the project topic (Introduction):

Student is expected to write briefly about the subject and the reasons for selecting the particular topic. Brief history, new updated information, current status of the topic should be included in introduction.

### 2. Importance of topic:

Student has to write the precise importance of project work by identifying the present environmental, scientific and social value of the project topic.

#### **3. Objectives of the project work:**

This should have the wrie an what you will do in the project work and must write the appropriate objectives. The objectives of the project work should be in proper manner.

#### 4. Project work methodology:

A short description of how the information will be obtained under the practical approach. It is necessary to use a

variety of data collection methods which includes survey, questionnaire, interviews, experiments, field observations, site visits, etc. The students should generally consider their local environmental issues for the project work (but not limited to). So that they can identify and formulate solutions to the problems surrounding them.

Students should be encouraged to illustrate the problems of the selected environmental issue. Encourage use of the newspapers / self-drawn pictures/ photographs of the issues taken by the students themselves.

### 5. Observations:

The data / information obtained from the selected topic should be depicted in the form of observation tables, graphs and brief points. The next part - conclusion is based on the observations recorded.

#### 6. Analysis of data:

It is an important step to analyze/evaluate the observations based on a various numerical or statistical methods, e.g. Mean, mode, median, correlation, average, percentage etc. Based on this analysis it becomes more accurate and effective. By this method, you can effectively indicate the numerical values through graphs, histograms, and images.

#### 7. Results and Conclusions:

The results should have interpretation and inference of the data / information obtained.

# **Project List**

- 01: Visit/ study a watershed development programme and prepare a project report explaining how it is sustainable development Example achieving environmental, social and economic development of the area.
- **02:** Study the role of any one national / International organization mentioned in the book and write about the work done by that organization in environment protection.
- **03:** List the various NGOs in your area working for environment protection and document various activities they have conducted.
- **04:** Arrange an interview with a person in your area working for environment and write down about his work.
- **05:** Visit website of any one of the organisations in Maharashtra which is working for environment protection or conservation of biodiversity and prepare a short write up on the work carried out in last five years.
- **06:** Collect the information regarding any one of the nationally recognized movement related to environment and prepare a short report on it.
- **O7:** Start a 'Nature-club/Eco-club in your school/college. Carry out any two activities like keeping premises clean, preparing a garden and taking care of plants and write report on it.
- **08 :** Collect the information about "Nobel Peace Prize" winner Environmentalists (at least two) and write about the work done by him/her and what message you get from this information.
- **09:** Study any pond, lake, river ecosystem in your area and make a report on what biodiversity you have seen at the place and

also if there are any threats like pollution, solid waste and what you can do to.

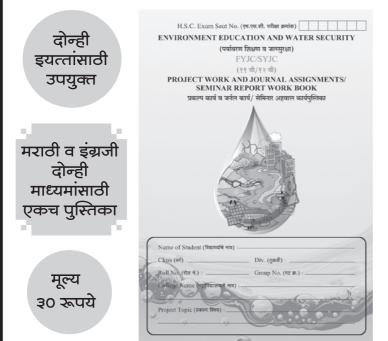
- **10:** Study any natural area in your surrounding and document flora and fauna of the area and write information on the species observed (any ten species).
- 11: Study any natural area in your village/ town/city (ex. hill, grassland, forest, river bank, lake) and prepare a report on biodiversity observed and food-chain and food-web in the area.
- 12: Document the biodiversity related news that are reported in local newspaper. Categorize them as positive and negative news. Write down any three actions that you can do to improve the situation.
- 13: Study the trees (any ten) in your surrounding and write down changes over time on these trees like flowering, fruiting time, leaf fall, birds/ insects seen or any nesting of birds etc.
- 14: Study the different flora in your locality with respect to their social/religious values.
- **15:** Collect the information about different invasive species in your area , where it is seen , how it has affected local biodiversity and what you can do to control them.
- 16: Collect the information on (any five) National Parks of Maharashtra and make tabular record of form name of the NP, area, location, district, common flora, fauna and any special feature mentioned.
- 17: Collect information on endangered species of plants (any five)/ animals (any five) in our country. Make tabulor record including name of the species, scientific name, location where it is found, threats to the species and any special feature mentioned.

- 18: Prepare a list of medicinal plants (any five) found in your area after interviewing an expert. (vaidu, any local tribal, grandparents in your/ friends house). Find out the current status of the species. Write what you can do to conserve.
- 19: Conduct a survey of biodiversity in your village/town/city(can be a group activity). Document heritage trees (old ,big trees), write their information, what you can see on them like birds. (nesting, roosting), insects, monkeys, squirrels etc.
- **20:** Prepare photo-gallery/album related to biodiversity (birds, insects, butterflies in the local area/school area and make a report on it.
- **21:** Observe the different types of birds-nests, make sketches and identify the birds.
- 22 : Visit any wetland in your area and write a report on the species of plants and birds seen on the wetland. Visit the site in winter month of October and document the changes in water level, bird seen (species and number). Write about any local migration/winter long distance migration of birds.
- 23: Make a disaster evaluation plan for your school during emergency. Explain during the National Day.
- 24: Study water conservation methods through various water harvesting techniques/ recharge system in your locality which is in practice. Make documentation of it with diagrams.
- 25: Survey and make a report of recycling of materials practiced at your home and create awareness about it among people.
- 26: List the recently occurred natural disaster phenomena likely in the Indian subcontinent. Describe the regional and seasonal profile of any two disasters.

- 27: Prepare a list of natural disasters, which are affect Maharashtra and explain their impacts and identify your role to reduce it.
- 28: Draw a chart of Do's and Don'ts for common disaster experienced in your region and display the same in your classroom/school or college notice board and also during festivals/public meetings.
- **29:** Design the disaster emergency kit on a chart. Write the working/Functions uses of Kit material.
- 30: Make an evacuation plan for your school during emergency. Display it in your classroom/notice board. Explain during the assembly and National Day assembly too.

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# इयत्ता ९९ वी व ९२ वी प्रकल्प कार्य व जर्नल कार्य/सेमिनार अहवाल कार्यपुस्तिका Environmental education and water security



- शासनमान्य अभ्यासक्रम व पाठ्यपुस्तकावर आधारित.
- मूल्यमापन योजनेनुसार सर्व पाठांवर आधारित.
- विद्यार्थ्यांसाठी महत्त्वाच्या सूचना.
- प्रकल्प निवडीसाठी मार्गदर्शन.
- विविध कौशल्य वापराची मार्गदर्शिका
- गुणविभागणी तक्ता.

## इयत्ता ९९ वी व ९२ वी प्रकल्प कार्य व जर्नल कार्य/सेमिनार अहवाल कार्यपुस्तिका नोंदवह्या पाठ्यपुस्तक मंडळाच्या विभागीय भांडारांमध्ये विक्रीसाठी उपलब्ध आहेत.

(१) महाराष्ट्र राज्य पाठ्यपुस्तक भांडार व वितरण केंद्र, सेनापती बापट मार्ग, पुणे ४११००४, 🖀 २५६५९४६५ (२) महाराष्ट्र राज्य पाठ्यपुस्तक भांडार व वितरण केंद्र, पी - ४१, औद्योगिक वसाहत, मुंबई-बंगलोर महामार्गावर, सकाळ कार्यालयासमोर, कोल्हापूर ४१६१२२ 🖀 २४६८५७६ (३) महाराष्ट्र राज्य पाठ्यपुस्तक भांडार व वितरण केंद्र, १० उद्योग नगर, एस. व्ही. रोड, गोरेगाव, पश्चिम मुंबई ४०० ०६२ 🖀 २८७७१८४२ (४) महाराष्ट्र राज्य पाठ्यपुस्तक भांडार व वितरण केंद्र, १० उद्योग नगर, एस. व्ही. रोड, गोरेगाव, पश्चिम मुंबई ४०० ०६२ क्व २८७७१८४२ (४) महाराष्ट्र राज्य पाठ्यपुस्तक भांडार व वितरण केंद्र, सिडको प्लॉट नं. १४, डब्ल्यू सेक्टर १२, वावंजा रोड, न्यू पनवेल, जि. रायगड, पनवेल ४१० २०६ क्व २७४६२६४६५ (५) महाराष्ट्र राज्य पाठ्यपुस्तक भांडार व वितरण केंद्र, लेखानगर जवळ, प्लॉट नं. २४, 'माघ' सेक्टर, सिडको, नवीन मुंबई-आग्रा रोड, नाशिक ४२२००९ क्व २३९९५११ (६) महाराष्ट्र राज्य पाठ्यपुस्तक भांडार व वितरण केंद्र, एम आय डी सी शेड क्रमांक २ व ३, रेल्वे स्टेशनजवळ, औरंगाबाद ४३१ ००१ क्व २३३२१७१ (७) महाराष्ट्र राज्य पाठ्यपुस्तक भांडार व वितरण केंद्र, रवींद्रनाथ टागोर सायन्स कॉलेजसमोर, महाराजा बाग रोड, नागपूर ४४० ००१ क्व २५४७७९६/२५२३०७८ (८) महाराष्ट्र राज्य पाठ्यपुस्तक भांडार व वितरण केंद्र, शांकुतल कॉलनी, व्ही. एम. व्ही. कॉलेजमागे, अमरावती ४४४ ६०४ क्व २५३०९६५











Maharashtra State Bureau of Textbook Production and Curriculum Research, Pune.

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