

## MANAGEMENT OF REGIONAL SCIENCE CLASSES

Kyung-SukLee, Hee Won Yoon, Mi Ock Mun, Heisook Lee  
WISE National Center of Korea, Ewha Womans University, South Korea

### Abstract

'Regional Science Class' is one of Science Korea Programs supported by Korea Science Foundation (KSF). Regional Science Class aims to facilitate easier but greater understanding of science and technology, making them fun and interesting to the general public. The management center for Regional Science Class provides various scientific activity and events in cooperation with KSF and collaboration organizations such as local government, local autonomy, science and technology institutes, and so on. Four major programs (Eup· Myeon-Dong–Science Class Program, Visiting Science Class Program, Regional Specialized Program, and Teacher Retraining Program) have been provided. Eup• Myeon•Dong–Science Class is the main program in Regional Science Class. The participants visit local autonomy center once a week, and enjoy and understand science and technology through funny and interesting activities and/or experiments.

Keywords: Science Culture, Regional Science Class, Visiting Science Class, Regional Specialized Program, Teacher Retraining Program

### 1. Introduction

Science culture has been attracted public attention in the 21st century, a century of scientific and technological revolution. Science culture can be defined as a complex of values, attitudes and way of life regarding science and technology, shared by the members of a society ([www.ksf.or.kr](http://www.ksf.or.kr)). It refers to an atmosphere where citizens apply science and technology to their thought and behavior, not just understand and value them. It serves as a catalyst to the construction of an advanced, multi-faceted culture, incorporating itself into other fields such as politics, economics and society ([www.ksf.or.kr](http://www.ksf.or.kr)). It is very important to pay more attention to science culture, which is progressively raising the quality of our lives to a higher level. "Regional Science Class" is one of Science Korea Programs supported by Korea Science Foundation (KSF). Regional Science Class aims to facilitate easier but greater understanding of science and technology, making them fun and interesting to the general public. Four major programs such as 'Eup· Myeon-Dong – Science Class Program', 'Visiting Science Class Program', 'Regional specialized Program', and 'Teacher Retraining Program' have been provided.

### 2. Management System for Regional Science Class

Management center for Regional Science Class provides various scientific activity and events in cooperation with KSF and collaboration organizations such as local government, local autonomy, science and technology institutes, and so on (Fig. 1). The representative roles of KSF, management center and collaboration organizations for Regional Science Class are summarized in Table 1.

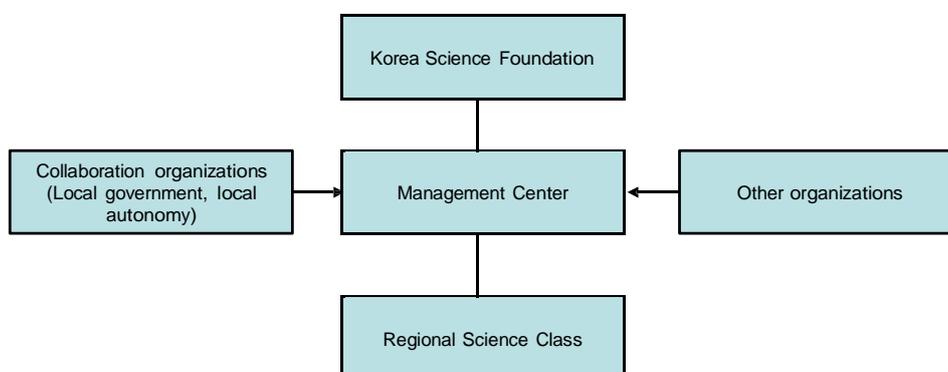


Fig. 1. Management system for Regional Science Class

Table 1. Roles of Korea Science Foundation, management center and collaboration organizations for Regional Science Class

Organization	Representative roles
Korea Science Foundation	<ul style="list-style-type: none"> <li>- Overall coordination of Regional Science Class Program: Planning, coordination, Evaluation</li> <li>- Administrative and financial supporting</li> <li>- Nurturing the science culture in Korea through Regional Science Class</li> </ul>
Management center for Regional Science Class	<ul style="list-style-type: none"> <li>- Providing four major programs: Eup• Myeon•Dong – Science Class Program, Visiting Science Class Program, Regional specialized Program, and Teacher Retraining Program</li> <li>- Planning and development of contents for Regional Science Class</li> <li>- Public relations</li> </ul>
Collaboration organizations (local government, local autonomy)	<ul style="list-style-type: none"> <li>- Administrative and financial supporting: Registration of students, matching fund</li> <li>- Providing classroom for Eup• Myeon•Dong – Science Class Program: local autonomy center, village office</li> <li>- Public relations</li> </ul>

### 3. Eup • Myeon • Dong- Science Class Program

Eup• Myeon•Dong – Science Class is a main program in Regional Science Class. Children, youths, and adults visit local autonomy center (or village office) once a week and do various activities and experiments related with physics, chemistry, biology, mathematics, fusion science, and technology (Photo 1). The participants can enjoy science and technology on daily basis through funny and interesting experiments, and understand science and technology better. The program of Eup• Myeon•Dong – Science Class is progressed by the following procedures (Table 2).



(a) Amazing circle



(b) Extermination game

Photo 1. Eup• Myeon•Dong–Science Class Program

Table 2. Manual for Eup• Myeon•Dong – Science Class Program

Planning ▽	<ul style="list-style-type: none"> <li>- Annual and sessional planning</li> <li>- Consultation with collaboration organizations</li> <li>- Modification and complement of annual and sessional programs</li> </ul>
Development and/or selection of contents ▽	<ul style="list-style-type: none"> <li>- Development and/or selection of contents</li> <li>- Evaluation and modification of contents by preliminary experiments</li> <li>- Preparation of instruction materials (for teachers/ for students)</li> </ul>
Preparation for activity or experiment ▽	<ul style="list-style-type: none"> <li>- Checking classroom: desk, chair, blackboard, instruments</li> <li>- Security</li> <li>- Public relations</li> <li>- Registration of students</li> <li>- Preparation of experimental materials</li> </ul>
Activity or experiment ▽	<ul style="list-style-type: none"> <li>- Checking students</li> <li>- Safety education</li> <li>- Activity/experiment</li> <li>- Evaluation</li> </ul>
Evaluation	<ul style="list-style-type: none"> <li>- Overall evaluation by quantitative and qualitative analyses</li> </ul>

#### 4. Visiting Science Class Program

Visiting Science Class is a program for less privileged people such as child-headed households, single parent families, low-income families, and handicapped persons. Management of the Visiting Science Class is similar to that of Eup• Myeon•Dong – Science Class Program (Table 3)

Table 3. Manual for Visiting Science Class Program

Planning ▽	<ul style="list-style-type: none"> <li>- Annual planning</li> <li>- Interviewing with a manager of social welfare institution</li> <li>- Collaboration conference</li> <li>- Modification and complement of annual programs</li> </ul>
Preparation ▽	<ul style="list-style-type: none"> <li>- Development and/or selection of contents</li> <li>- Preparation of instruction materials (for teachers/ for students)</li> <li>- Selection of volunteers and their training</li> <li>- Confirmation of classroom and instruments</li> <li>- Donation of science books and goods</li> <li>- Purchasing and forwarding of experimental materials</li> </ul>
Visiting ▽	<ul style="list-style-type: none"> <li>- Checking experimental materials</li> <li>- Safety education</li> <li>- Activity/Experiment</li> </ul>
Evaluation	<ul style="list-style-type: none"> <li>- Quantitative and qualitative evaluation</li> </ul>

#### 5. Regional Specialized Program

A variety of Regional Specialized Program can be designed and performed (Photo 2) according to the capability of management center and characterization of regional societies. The developed programs are as follows; Regional Science Class festival, enterprise and research institute visiting, Eco-park field trips, scientist lecture, science movie viewing, and etc.



(a) Natural history museum visiting



(b) Science movie viewing



(c) Regional Science Class festival



(d) Scientist inviting lecture

Photo 2. Regional Specialized Program.

## 6. Teacher Retraining Program

Teacher Retraining Program such as workshop and specialist lecture can be directly planned and performed by the management center. It also can be performed by the indirect methods such as supporting the education fee for programs provided by professional institute, and the admission fee for scientific exhibition (Table 4, Photo 3).

Table 4. Types of Teacher Retraining Program

Program	Example
Workshop	<ul style="list-style-type: none"><li>- Preliminary experiment</li><li>- Activity/experiment demonstration</li><li>- Conference</li></ul>
Specialist inviting lecture	<ul style="list-style-type: none"><li>- Scientist</li><li>- Science communicator</li><li>- Educator</li><li>- Psychologist</li></ul>
Others	<ul style="list-style-type: none"><li>- Supporting education fee for WIST SC training course</li><li>- Supporting admission fee for scientific exhibition and science museum</li></ul>



Photo 3. Specialist inviting lecture.