

Morioka Dai-ichi High School

# **Global Inquiry 2018** Course Presentation in English

June 7 Thursday, 2018

Time	Presentations in Each Course	Locations
14:20	1. Role Model of Local Community	Floor 2 3-1 Homeroom
	2-1. Ideal Sightseeing Tour (attracting people from	Floor 4 Language Laboratory
	overseas) 1 *group1-8	
	2-2 Ideal Sightseeing Tour (attracting people from	Floor 2 3-3 Homeroom
	overseas) 2 *group9-16	
	3. Prestige of the Products Made in Iwate	Floor2 3-4 Homeroom
	4. Education Curriculum on Global Standard	Floor2 Science Room
	5. How to Accumulate Global Intelligence in Rural Area	Floor 2 3-5 Homeroom
	6. Role Model of Regional Medicine	Floor 2 3-6 Homeroom
	7. Science and Mathematics Course	Floor 2 3-7 Homeroom

#### Materials

# 1. Role Model of Local Community

# Group 1: Super Global High School Research Program increasing young people in Iwate

The purpose of this study is increasing young people in Iwate. At first, we make a plan that increasing young people to stop Iwate's young people's going to city. We surveyed for students of Morioka First High School. We take part in "Morioka Summer School". However, we found that it is impossible to succeed in our first plan. So, we make the second plan that increasing young people by U-turn. The plan is possible. To succeed in this plan, we try to utilize LINE. We hope that our study become an opportunity when a youth increase to in Iwate.

## Group 2: How to make Iwate's community comfortable for migrants

The purpose of this study is to deal with problems of decrease in Iwate's population by increasing in migrant population in Iwate. But, it is sometimes said that not only Iwate but also local communities are closed and characteristic. It is hard for those who are from other region to get used to local customs. So we think that we have to solve this problem.

#### Group 3: Gender equality in Iwate, Japan

We think gender gap in Japan happens on this way. First, men's working hour is so long.Second, men can't enough house work. Third, women have too many things to do. Finally, women can't enough sleep. We have two solutions. One is "Iku-boss". The other is make our idea widespread.

#### Group 4: Come back game solves the problem of falling the rate of population of the young

In Iwate, there is a big problem. It is that the number of pay people in Iwate is decreasing. We thought there reason why they get away from Iwate. First, they don't feel the attraction of Iwate. Second, they don't know the advantage of working in Iwate. Last, they don't image that they return to Iwate. So we carried out the gone named "Come back game". We conducted this game in forty people. But the first plan was failure become they can't imagine concretely. So we carried out the second plan. This new game includes the movie of "innovators". Through this game, they could image the future in Iwate concretely and play with a lot of fun. So we think we can solve the problem by using "Come back game". Through this project, we found that the way of using game can be a solution to many problems.

## Group 5: Activation of community

We thought the problems of underpopulated area, decline of public transport, store collapses, few playground and unsafed roads are caused by decline of community. That solution is to make friends who express greetings easily or depend on something happens in each community and what is easy to do is to find a person with a good taste and some sex or some age. By doing so we thought we can deepen our relationship. The main objective of this paper revitalize community and make a city that everyone live comfortable.

## Group 6: How to Develop MORIOKA MAIN STREET?

We wonder what makes Morioka Main Street become popular and Morioka city develop. We think it is important for Morioka Main Street to secure safety for children. So that we think holding some events which children can enjoy is good to make Morioka Main Street active and safety. Then we discussed what event is good to hold at Morioka Main Street with Mr. NAKAMURA. Through several discuss with Mr. Nakamura, we concluded that "DARUMASAN-GA-KORONDA" is good for event.

### Group 7: Iwate as a sustainable city

We research about chicken droppings biomass generation electricity. The purpose of this study is using renewable energy efficiently. First, we thought that it is possible to recover chemical energy by biomass power generation. At last, we reached a conclusion that we can apply extra heat of chicken droppings biomass generation electricity to supplying heat to away places. We did field work three times before reaching this conclusion. We think that, the social meaning of this study is to arouse realization of society that can recycle resources completely.

# Group 8: Revitalization of the local community by clean energy

We thought that there are two big problems. That is "Aging population with a declining birthrate" and "Global warming". Both of these are very difficult to solve at the same time. We decided to solve "Aging population with a declining birthrate" first.

# Group 9: Project of "Young people should be lived in IWATE in Future"

We think that Morioka city needs to change Population problems —— for example, depopulation of the young people. What should we act doing? How do we stop the depopulation?

There was the hint in administrative services through the Internet.

"Makimaki-Hanamaki Project" was started by City government but was support by Citizens. It is an ideal I deepen attachment from the situation of the combination participation in planning to utilize the (Deep Learning) hometown understanding that local people know the hometown deeply and the knowledge, and to make the media together to the land, and to build a series of cycles called expansion of the relations population and "the domiciliation promotion" more.

# Group 10: Town Planning for bicycle user

We thought we should do "Town Planning for bicycle user" to increase the population of Iwate. For our theme, the improvement of bicycle lane is effective. But it's very difficult for high school students to take part in the improvement. So we thought of what we can do. As a result, we found that we need to change the individual mindset by informing the danger.

# 2. Ideal Sightseeing Tour (attracting people from overseas)

# Group 1: How to bring foreign tourists to Western Japan?

Our purpose is to bring foreign tourists to Western Japan. Most of foreign tourists have not come to Tohoku. However we think that we can make tourism plan between Tokyo and Hokkaido by using tourist resources in Tohoku and Hokkaido. Then to make use of food culture, natural and festivals that original of Iwate prefecture, and report many charms to foreign tourists. By doing so we can expect that the number of foreign tourists to Iwate is increasing.

# Group 2: The extension of mutual demand between Iwate and Taiwan by using festival

This deta shows that about 50% of foreign tourists who visit Iwate is Taiwanese.



According to this fact, we can make the business of sightseeing develop more through the communication with Taiwanese.

The reason why we paid attention to the festival is that the festival is good tool which people can enjoy without the relation of languages and races.

If we use Japanese and Taiwanese festivals as tourist source, we can connect Japanese and Taiwanese.

Concretely, we make interaction sansa festival and lantan festival, because each of festivals is famous among each people.

# Group 3: The Research of Agritourism Using "Country Sense" in Iwate

Our research is that how to increase visitors of Iwate using "Country Sense" in Iwate. We want many people to feel Iwate and know charms of Iwate. We searched the present condition of tourism in Iwate, first. By the way, we focused on agritourism. Therefore, we decided to search agritourism implementation areas of in Iwate prefecture and other prefectures and visit. Place to visit is a farm inn Seisetsukan in Senboku city, Akita prefecture. We received the talk and checked the current state of Iwate. We contacted to the prefectural office to investigate agritourism of Iwate.

As the result, we found our problem. The biggest problem is that information can't be spread. So, we changed our thought about sending method of information.

We would like to make a web site about agritourism in Iwate.

#### Group 4: Regional Unity for Tourism

The purpose of this study is" what should we do for unity of Iwate's tourism to make a prefecture where tourists and residents are likely to sightsee. Today, lwate has been working on tourism each city, town or village, and Iwate's traffic is not developed. Therefore, we built up two points, "Unity of concept" and "Unity of traffic". In Unity of concept, we set "Ihatov Iwate" as one slogan to simplify cooperation with each municipality, and we asked Nara' government office how to spread our information. In Unity of traffic, we proposed our Idia ,"Iwate-Dokodemo-Passport" and "QRcode", to Iwate traffic corporation. Unification of concept will make cooperative relationship among municipalities and Unification of traffic will make our travel more free and enjoyable.

## Group 5: The expansion of SANSA people from foreign country can participate

"SANSA ODORI Festival" is a festival held in Morioka from August 1<sup>st</sup> to August 4<sup>th</sup>. This festival is crowded with tourists every year.

We thought that if many foreign people who are interested in Japan get to know about SANSA ODORI, the number of tourists and participants will increase. Morioka would be active.

We asked Morioka SANSA ODORI Festival Organizing Committee about their activity for abroad. As a result, we are going to suggest two pieces of idea.

#### Group 6: Youth Iwate tour used of the "Ingress"

We researched about Ingress. So we believe Ingress can increase the number of young tourists. Also, we add stamp rally to it, we can suggest new tour plan which is community-based tour. According to we carry out it, more and more tourists come to Iwate again.

#### Group 7:Bus tour in Shizukuishi

What do you think about Iwate? Our study started from this question. Iwate has the largest prefectural land in Japan and there are so many sightseeing spots. Among them, we focused on Mt. Iwate. It is because Mt. Iwate is only a little way from Morioka Station and it is the biggest symbol of Iwate and its nature.

Considering foreign tourists and people from other cities, it is very important to make a good transportation. Then we thought running a bus is essential to enjoy the tour in the foot of Mt. Iwate, so we suggested a bus tour plan that can entertain drinkers.

We went to hot spring ryokan in the foot of Mt. Iwate and local beer company in Iwate. We asked some question and suggested our tour plan.

Our research will advantage for tourism in mountains area. Through a good tourism, we can promote a small town.

#### Group 8: We Make Iwate Cheer Up By "Ramen"

Morioka-Sanndaimen, Reimen, jajamen, wankosoba are getting less popular. So we thought we make Iwate cheer up by "ramen". If we produce "ramen" which is made in Iwate, Iwate will be famous for ramen. We have decided to use "ramen" as a tool to cheer up Iwate, which is poor area because ramen is very popular in Japan and it is called food universally loved by all citizens. Through Field Work, we realize that we should think about cost performance, that we need long span search to make ramen become popular, and that we have to investigate ramen out of Iwate.

# Group 9: Local charms of Tono

The purpose of this study is to get to know local charms deeply. We want tourists to go countryside and find local charms instead of going to cityside and enjoy famous tourist spots. So we chose Tono city for our study. If tourists find local charms, they must be repeaters and they will visit Tono again and again. We decided to use "working holiday" to make our tourist plan. We went to Tono and interviewed NPO cooperation which provide farm work program by using working holiday and Tono tourists association. There were some problems during the study but finally, we made an original tourist plan. We think we can appeal local charms through our study. We hope that the number of tourists who wants to visit to Tono and Iwate will be increase with our plan.

#### Group 10: How to bring foreign tourists to Western Japan?

Our purpose is to bring foreign tourists to Western Japan. Most of foreign tourists have not come to Tohoku. However we think that we can make tourism plan between Tokyo and Hokkaido by using tourist resources in Tohoku and Hokkaido. Then to make use of food culture, natural and festivals that original of Iwate prefecture, and report many charms to foreign tourists. By doing so we can expect that the number of foreign tourists to Iwate is increasing.

## Group 11: Green tourism with industrial experience

We studied about green tourism with industrial experience in order to solve depopulation problem. In summer, we went to Shizukuishi and get some information in field work. After that, we decided to make our original tour plan.

#### Group 12: Sending out the Attraction of Iwate at Morioka Station

If we introduce the famous places in Iwate at the Morioka Station, tourists can have more chances to know about Iwate. By doing so, it is also expected that more and more people visit Iwate. As for the residents of Morioka, it's good to improve the station, which they often visit.

Through the field work, we learned that participatory events and destination campaigns were held at the Morioka Station. We also discovered that the problems were big baggage of tourists and response to the elderly people, disabled people and foreign people, especially Taiwanese.

Present Morioka Station has a lot of coin-lockers and guidance in English. However, they don't meet foreigners' desire. We have to increase bigger coin-lockers or baggage checks, and guidance written in several languages.

## Group 13:

#### Group 14: SNS -to attract tourists to meal city

In Iwate, many people live along high way, for example, Ichinoseki, Kitakami, Hanamaki and Morioka. We think many cities which is far from main city would fall in the future so we decide to make some plan to attract people to local city by using SNS which can inform for the general public. We researched twice, with e-mail and on-the spot ingastigation and took pictures to share with SNS and sent information of the local city.

#### Group 15: Creating "Yuru Character"

"Yuru Character" is doing good work. They have grown in recent years. For example, "Kumamon", a character of Kumamoto, made a very big movement. He is a local character that is representative of Japan now. Some Japanese people think that Kumamoto is about "Kumamon". Then, he contributes to the increase

of tourists in Kumamoto. So, how about Iwate? "Wanko kyodai" is a character of Iwate. Do you think Japanese people know them? And, do you think that there are people reminding of them from Iwate? Most people say "No". So, what should we do? Then, we started studying on local character.

## Group 16: Rental Car Travel in Iwate

There are many tour spots and delicious food in Iwate. For example, Reimen, Cyusonji temple, koiwainozyo. In spite of these good point, nowadays Iwate is declining. We think Iwate is need making more active So, we studied the tour plan.

# 3. Prestige of the Products Made in Iwate

Group 1: Search to develop and sell goods at foreign countries that put "Nambu Ironware" and "Urushi"

The purpose of our study is to spread Nambu Ironware and Urushi to the world. So, we thought we should export the new product matching other countries by combining these to product. We went to "Iwachu" "A meal Katsurashimizu" "Tekiseisha" "Ltd.Industry of Jyobojiurushi" as a field work. We failed once, but after all, we decided to produce a waffle maker. This is what makes good use of attraction of Nambu Ironware and Urushi. And this will collaborate with Hello Kitty. We also decided to export to France because we found France is the most suitable country to export. Also we will make an application to an exhibition in foreign countries to products.

#### Group 2: Expect of chicken in Iwate

We found out that making chicken in Iwate is No.3 in japan.So, we thought that we can export it.We find few possibilities of being able to export.For example, 'Low' and 'Freshness'.We think if we can get specialist of export's help, exporting is possible.We can export them if we heat sterilize and seal them.

## Group 3: Finding the new shape of Hidehiranuri and exporting it to Europe

We aim to find the new shape of Hidehiranuri that is accepted by European and export it to Europe. We thought the best shape of Hidehiranuri for European was a tea set because Japanese lacquerwork was valued by them in 16 centuries and they enjoy drinking tea.

We interviewed two company presidents for research. We designed many patterns of tea set and we discussed how to get money, how make tea set and how to sell it.

Finally, we could suggest the tea set of lacquerwork to a company, but difficulty of raising money prevent us from accomplishment of this project.

#### Group 4: Export Ohno woodwork to the world

To make a concrete plan of new products with "Ohno woodwork". Finally, we export them.

# Group 5: Smoothies using the Iwate specialty products

Smoothies are popular among people around the world as healthy foods. We thought foreign people who like healthy foods like Washoku are interested in smoothie made in Japan.

Therefore, we study for a year to spread the good points of Iwate by producing smoothies that used Iwate specialty products.

#### Group 6: Attraction outgoing of Iwate prefecture by Moriokadagashi

Dagashi means cheep and traditional sweets in Japan and Morioka-dagasi is our regional dagashi. We want to spread our traditional sweets. So we need arrange them to please foreigner.

# Group 7 To extend Sake culture.

We decided to study about Sake because Iwate is well-known as a Sake-producing area. We want to extend Sake culture around the world. We extend the culture by using SNS and website.

#### Group 8:

#### Group9:Export the daily product that is good quality for foreign countries

We think that the daily product of Japan is high quality, but it isn't spread foreign countries. We have studied the way to import it for there

#### Group 10: Proceedings of exporting high-quality Maesawa beef

Maesawa beef is high-grade beef and the scent and the taste of it is wonderful. But there are some problems to export it. We examined the regulation to import it and popularity of Japanese beef. Finally, we decided to export it to Taiwan and sell it in high class hotel. Maesawa beef will be more famous if we do our best to spread it all over the world.

#### 4. Education Curriculum on Global Standard

# Group 1: Japanese education

We are wondering whether Japanese classes are ok with current situations. We researched the best way of teaching contemporary Japanese, classical Japanese, classical Chinese and how we can improve them. Our assumption is active learning helps us study hard and has a big effect on our attitude toward each sections. We visited a professor at Iwate University and asked him knack of it. We finally concluded that inaugurating new schemes and add them to classes in the past and using electronic items. That's I-Pad. By using them, we can get a lot of knowledge and make our understanding better. We would like to carry it out as soon as possible.

#### Group 2: Disinterest in science of children

The purpose of this study is to prevent children from to disinteresting science. If children hate to study science, the most advance technology will not develop. It is need to tie between science and my favorite subject. We thought of three ways to research. First we visited the children's science museum in Morioka, and we interviewed Mr. Namioka. He told that he wants to cooperate with school and science museum. Second, we send a questionnaire about science to students in Morioka Daiichi high school. Last we visited "Risupia" in Tokyo. We learn things that it is difficult to cooperate with school and science museum. From this the children's science museum disagree with "Risupia" in their cooperation.

#### Group 3: Promoting multicultural education by globalization~Let's cheer athletes in Tokyo Olympics!!~

Japan will hold Tokyo Olympics in 2020 so the purpose of this study is livening up this event not only in Tokyo city but also in local area. We want to achieve this goal through educational activities. Therefore, we suggest "Ikkou Takoku Activity". In this project, children learn a lot about foreign countries for example food, language and so on and cheer the country's athletes. This project may effect on livening up this event and producing global human resources because children will come to be interested in foreign countries. Every child can be a global human resource so we want to make use of this opportunity. We referred Nagano's Olympics educational activity. We also visited Aiina international interaction center and Takizawa second junior high school and asked some questions. We concluded to interact with athletes on the Internet for example, Skype and making a homepage.

#### Group 4: Education of Newest Technology

In japan, most of the students study hard. But, they only remember their teacher's class to increase knowledge. As a result, they feel classes and a school to be trivial. We think that they need to introduce "Experiential learning". But, this learning costs a lot of money and time. By the way, do you know "Virtual Reality"? It is possible to experience various things. For example, seeing dinosaurs and the universe. We thought it is good to match "Experiential learning" and "VR" and researched this educate system. As a result, we found that the students improved their learning efficiency and had the interest and eagerness in the lesson of VR more greatly than normal lesson.

And we understood that many children come to be negative from elementary school to junior high school,

so we considered introducing "VR Experiential Learning" into junior high school.

## Group 5: Improve academic ability by enhancing scholarship system

We studied for the purpose of improving the quality of Japanese education. Based on the correlation between academic achievement and income. We thought that if scholarship system in Japan was improved, the quality of education in Japan would develop. In develop countries abroad, they adopt a benefit type, and Japan mainly adopts loan type. Both have advantages and disadvantages, but I thought that if we combine two strengths, a fulfilling scholarship system could be realized. As a result of the survey, since it is difficult to secure financial resources for scholarships in Japan, we propose a method of securing financial resources.

# Group 6: Home environment and education

We had studied relationship between poverty and education in the world. But we found that changing situation of the world was very difficult. So, we thought from a different point of view, and changed our theme. A lot of children are suffering from poverty and lack of education.

# Group 7: The way of education to bring up people who can deal with globalization

Our research aims to grow people who can adapt the globalization.

At first, our hypothesis toward this purpose was "increasing our communication tools to communicate with foreign people."

We visit professor Yamazaki in educational department in Iwate university to confirm our hypothesis. She told us that we should learn our own languages and culture for the sake of adapting the globalization. Moreover, it is essential for us to expand our values about other cultures.

Based on them, we reach a conclusion. We should value Japanese more than before. And we must expand our thoughts toward other cultures though compulsory education.

## Group 8:ICT education

Do you know ICT education? It means "Information and communication technology". Recently, various things are mechanized and the way of education is also mechanized and varied. But is it true that the education which are all mechanized are effective? Certainly, to be many things are expressed by number or graphs is useful, but there is such problems by using it. Our group asked all the students whether it is easy to understand or not. As a result, we got positive and negative thought from the survey. From those things, we suggested a new way of ICT education. Although it is difficult to realize it because of some problem, but we are glad if you think about a new education in the nearly future.

# Group 9: Building a system for developing regional activity and education

We studied about the educational system in area. Our purpose is to acquire 21st century type ability .This ability which constitutes of three elements basic power, thinking power, practical power is needed to live in our future. We thought that we can acquire basic power and thinking power. But it is difficult to acquire practical power. It is good for acquiring to the practical power. We have two reason. First, we can interact with all ages. Second, we can make most of the characteristics of the local area. We define the area as elementary school distract .Please look at graph1. Blue graph shows the number of people who had join in the area activity. And red graph shows the number of two—income families. According to the blue less and less people are taking part in the activity. In contrast to the blue graph. Red graph shows the number of two—income families is increasing. Therefore we think there are two reasons the decline of the area activity. First, children are decreasing. Second, the number of two-income families is increasing. We end in the result to go to fieldwork in Marukan and Komimachi..As a result it is three points to do the educational system in area. First, cooperation between regions. Second, keeping on to see the children. Third, the idea to get together to multi-generation exchange.

## Group 10: Research of the Japanese New Curriculum

If we try to solve global issue, we have to think for ourselves. But now, Japanese education system is passive. So, we thought that we have to suggest new curriculum which encourage students to act for themselves. We visit Yokohama Montessori Elementary school to search such curriculum. After that, we developed the new specific curriculum. We discussed with stuff of city office and suggested this plan to them. We got many hint at the discussion. But, entirely the effect of our activity seems small. In order to attain our goal, we are going to blush up our plan and act more positively.

# Group 11: Research of educational style for making globe people with abundant environment in IWATE

We don't like usual lesson style because we are tired of sitting all the time and we can't find meaning in the boarding book. We began researching for a lesson way that students can enjoy it. We thought that the way of learning that made use of nature is like a child of IWATE and set up such research theme.

# Group 12: relationship between religion and education

We came up with "The ideal human image in the global society" from an educational perspective. Keeping in mind our ultimate goal to cultivate a person who has an understanding of and is receptive to different cultures, we thought we first have to seek educational methods to understand different culture. But it's very difficult things to understand all cultures because there are many kinds. So, we focused on religion because it is deeply related to different aspects such as people's lifestyles, sense of value and so on. Based on our fieldwork, we suggested plans to hand down this knowledge and understanding of religion to future generations and the concrete methods for teaching it.

# 5. How to Accumulate Global Intelligence in Rural Area

# Group 1: Attraction of ILC Which Effects Surrounding Area

Our research's purpose is to predict the change living environment surrounding ILC by attracting this and show solution about our hypothesis. Which is to immigrant many scientists and their family from abroad to japan, to gather researching facilities and companies surrounding ILC and develop that area.

We researched in three ways. Ibaraki prefecture Tsukuba city hall science technology promotion department, researching about Iwate's ILC policy by internet, and visit High Elementary Accelerator Research Organization stands KEK.

By research, attraction ILC connects researching facilities and venture-company and some another facility gather surrounding ILC as a result, there will develop slowly. So about 3000 scientists and their families will come to japan. However, to make new place to live them is difficult from economically point, and it is thought a conflict between residence new and old So we should make living area in Morioka and Sendai. By such movement, we will be demanded to from global city.

# Group 2: Search to establish laboratory of fish farming in Riasu coast.

We set "search to establish laboratory of fish farming in Riasu coast." This is because prefecture of Iwate has Riasu coast, and fish farming is prospered in its neighboring area. The purpose of this study is to sustain supply of fish. The supply changes every year, so there is a year of poor catch. We thought we should make the supply stable. And it is necessary to develop fish farming. Developing fish farming is increasing the kinds of fish we can farm and making fish farming more efficient.

## Group 3: Building the Base of Intellect in Iwate

We began this study in April, 2017. The purpose of this study is to develop our homeland, Iwate as a base of intellect with International Linear Collider (ILC). Through this study, we find that we need to maintain public transportation and facilities, use identity of Iwate and educate the young to produce good entrepreneurs to become the base of intellect. Moreover these are things we can do to build a base of intellect in Iwate. They are to accept foreigners and to have an interest in studies in Iwate.

#### Group 4: Study to make Iwate a pioneer of the wave power generation

It is that the global warming is the serious problem in the current earth. Therefore I thought that an eco-friendly generation method was necessary to realize sustainable society. In particular, we focused on

wave power generation. Wave power generation is the method to generate electricity mainly using the energy of the sea wave. It was difficult immediately, but, we concluded it has possibility to become the sustainable energy.

# Group 5: Creating society AI and human live together

Recently, AI has developed more and more by scientists. Some mediums often say "AI will win human beings in the future". Is it true? We thought that we should live with AI as friends, so we came up with an idea that AI should have own feelings. However, by our research, it is difficult. So, we constructed a new hypothesis that we should make the world that AI support human.

#### Group 6: The way to use AI

We study about AI (artificial intelligence). AI is the simulation

of human intelligence processes by machines, especially computer systems. Today AI has appeared in our society, so we think we can use it for the other part of study.

The good points of AI are having a lot of information and learning from the precedent. We tried to use good points of AI. We concluded we use AI for operation of a large event. It makes us efficient and gives us free time and it saves cost.

We can apply AI to other academic parts. We could not do concrete action.

## 6. Role Model of Regional Medicine

#### Group 1: CHANGING MEALS CAN PREVENT HYPERTENSION

We put this research into action to spread the way to prevent lifestyle-related disease. Hypertension is included it. Cerebral apoplexy can cause due to worse hypertension. That is why, we constructed a hypothesis that there are many people who have hypertension in Iwate. We thought that changing our diet is the best way for us to prevent hypertension. We conducted on interview for Kawakubo Hospital's nutritionist. And, we actual made the menu for one week. However, it costs too much. We thought it was good to make use of healthy on the market rather than starting all over again from scratch. Our efforts little was accomplished. But we were able to find many improvement.

## Group 2: Let's keep your mouth clean!!

We heard the lecture of Kobayashi Takuya, and the lecture was about the relationship between chewing and Dementia(認知症). At that time, we were aware of the importance of oral care.

Our goals of this study were to know the effect of oral condition to the whole body, and to suggest the idea of keeping oral condition good.We made hypothesis. First, there may be some relations between oral condition and our health. Second, gum disease may has something to do with Diabetes(糖尿病).

We carried out an experiment in order to search the condition of mouth of Morioka-dai-ichi high school students and to research effectiveness of "Dokudashi-Udai". In blushing, tooth spaces are dirtier than the other part. And we discovered that "Dokudashi-Ugai" is effective way to keep our mouth clean.

#### Group 3: The burden of caregiver and the way of reducing it

Recently, problems by nursing care stress have become serious and the number of Japanese senior citizens is increasing. Therefore, we think that we can solve the issue by researching home care which can support caregiver. We came up with these hypotheses to reduce the burden on caregivers. Those are "Mental health care to caregivers, SNS in medical use, Spreading the robots to support care, Day care service." We did a research through the Internet and fieldwork to Yuai-no-machi and prefectural government. Then we concluded through the research and fieldwork. Those are "Support on mind aspects, Measure against leaving work for care, Provision of the chance to return to the society, Spreading of the policy." This result of research will have an influence on two points. First, it enables caregiver to care with little burden on some aspects. Second, it reduces the problems which stressful caregiver caused by reducing their burden.

# Group 4: By using horticultural therapy, we can care elderly people and reconstruct the community.

Hamarrassen Farm, at Rikuzentakata City, was set up after 3.11 near the shelter.

Before opening the farm, victims talked only about weather every day. After opening, they started to have friendly conversations. We heard about this two years ago and wondered if gardening activity has a good effect on our mind.

# Group 5: Role of general practitioner in the local area

What should we do to decrease the amount of work of general practitioners in the area.  $\downarrow$ 

It is necessary to get 'privilege' by doing the general practice?

It also needs patient's education in order to reduce the burden on doctor's works.

## Group 6: A study about new health goods and examination way

The purpose of this study was to reduce the burden of regional medical. Doctors of country had too much burden, which is major problem, so we did two studies to solve this problem. One was to create new health goods for realization of preventive medical. One was to find new way to examine patients for saving more lives. As a result, we could not create complete new them. But we could make some plans. If these plans are realized, we guess that they help to reduce the burden of regional medical.

## Group 7: Emergency Medical Care With Doctor Helicopter

We research the medical treatment of Doctor Helicopter to suggest how to solve the problem about it operation in current. It is necessary for emergency medical care, but it has many problems for example it can't fly at night. So we think that it can respond a wide range of need and save many lives when we suggest solutions about them. It has to take a patient to the hospital as soon as possible. It also cooperates with other prefecture in Iwate prefecture in order to reduce transportation time. Through research, it is difficult for us to support medical directly, but we can support it indirectly.

## Group 8: Preventions of stroke in Iwate

. We studied the way to prevent stroke in Iwate. We compared the intake of salt and percentage of death by stroke of Iwate, Osaka, the whole country. We thought that the prefecture with many salt intakes had a relationship to rise by the stroke death rate. The stroke has three causes. First, high blood pressure based on intaking a lot of salt. We will be able to low blood pressure to intake vegetables. Second, hardening of the arteries based on lifestyle-related illnesses such as diabetes and high dyslipidemia. We will be able to improve them to exercise which put together aerobic exercise and resistance training. Third, the character of a prefecture which is apt to give up. We will be able to improve it by educating children.

## Group 9: Action to the stress caused by smell

In this research, we have studied effects of smell to stress. The purpose the study is reducing our stress and living better life.

Sense of smell is concerned directly with brain. So, our hypothesis is that we can get a relaxing effect by smell.

We experimented with smell to inspect our hypothesis.

We went "Japan Aroma environment association" to do fieldwork. We learned about the way of experience and basic knowledge.

We used sweet orange and patchouli.

As a result, sweet orange have effect to raise our tension and have effect to control our irritation.

# 7. Science and Mathematics Course

- Group 1: Banana can make women happy. ~Let's prevent transmission of UV rays.~
- Group 2: About preservation method of curry.
- Group 3: In order to spend summer comfortably
- Group 4: Red White Cap ~In order to become a savior children~
- Group 5: Making lake Takamatsu into a power plant ~The research about microbial fuel cell~
- Group 6: Biogenesis of MEDAKA
- Group 7: The influence of UVA on Euglena
- Group 8: Modeling and Analysis of Congestion Phenomena
- Group 9: Temperature And Color
- Group 10: Our research on WPT
- Group 11: Does mini4WD with wing dream of "Downforce"?