

Activity 3: Fieldwork study

Topic: "Biodiversity of Nam Cat Tien tropical rainforest"

I. The reason of performance:

- Visiting nature in junior secondary school was an activity which is performed a long time ago. However, fieldwork activity has not been performed. Fieldwork study is form to help students better understand the lessons from textbooks, learning from nature, teachers with the motto used to say about the nature of nature. Students joined in specific lessons as search about biodiversity; learn about the creatures' camouflage ... thereby educating students a love of nature, love country; building awareness of protecting biodiversity; moral education, improving skill of writing depicting.
- Thus, by method of fieldwork study according to integrated theme, the students not only visit nature but only study gently; attract to help them better understand many subjects; learn interestingly, effectively and meaningfully. Through a trip they know more than mere sightseeing.

II. PURPOSE:

- Help students understand and explore the natural world. Therefore, it will help them know to preserve habitat, love of natural. Practice practical exercises, train outdoor activities skills, teamwork skills, and learning skills in the nature, communication skills, and ext.
- Help teacher penetrate real life, enhance professional knowledge, practice guiding students study in the nature by special subject, project performance, teamwork, collection of materials, enriching lectures in class.

III. PERFORMANCE PLAN:

Week	Time	Teacher's activity	Students' activities
19	From December 23 rd , to December 25 th , 2013	<ul style="list-style-type: none"> - Combine teacher of computer science to supplement skills for students. - Combine literature teacher and geography teacher to prepare exercises for students - Prepare instrument for the trip. 	Students practice the skills of editing text and making the report by Power point
	December 26 th , 2013	- Discuss with students (the first session)	<ul style="list-style-type: none"> - Discuss (the first session): know name each other. - Give exercise one: each student do: <ul style="list-style-type: none"> + One slide to introduce you by Power Point. + One lesson learn about one species of endemic plant by

Week	Time	Teacher's activity	Students' activities
			Word (in teacher's list)
	December 27 th , 2013 December, 29 th , 2013	- Write curriculum, project file. - Answer students' difficulties	Do exercise one.
20	December, 30 th , 2013	- Write curriculum, project file. - Prepare instrument for next teaching.	- Do exercise one. - Remind exercise one again for class 6.16 in the morning, class 6.18 in the afternoon.
	December 31 st , 2013 January 1 st , 2014	- Write curriculum, project file. - Meeting group of teacher.	Do exercise one at home
	January 2 nd , 2014	- Write curriculum, project file. - Prepare instrument for next teaching.	- Hand in exercise one. - Discuss biodiversity (the second session). Class 6.16 at period 4 in the afternoon in lab room. The groups prepare instruments and do experiment at home. - Complete discussions biodiversity.
	January 3 rd , 2014 January, 4 th , 2014	- Write curriculum, project file. - Check and give points exercise one.	- At home: Groups prepare instruments for activity two. - Complete discussions about biodiversity.
	January 5 th , 2014	- Write curriculum, project file. - Check and give points exercise one.	- Read reference books about tropical rainforest. - Review lessons of geography.
21	January 6 th , 2014	- Check again instruments for the trip. - Collect exercise two and give points.	- Period 1, Class 6.18 discusses biodiversity at class.
	January 7 th , 2014	- Inform project to students. - Check again instruments for the trip. - Collect exercise two and give points.	- Read reference books about tropical rainforest. - Review lessons of geography. - At class: + Period 1, class 6.18 are informed project. + Period 2, class 6.16 are informed project. - View detail report of project of class.
	January 8 th , 2014	- Check again instruments for the trip. - Collect exercise two and give points.	- At home: Groups prepare to perform project.
	January, 9 th , 2014	- In the morning, the teacher	- At home: students prepare

Week	Time	Teacher's activity	Students' activities
		<p>teaches two shifts about practical lessons: learn about the ecosystem.</p> <ul style="list-style-type: none"> - In the afternoon, the teacher guide groups how to do sample plots. 	<p>perform project.</p> <ul style="list-style-type: none"> - In the classroom: <ul style="list-style-type: none"> + In the morning: Discuss (the third session) practical lessons: learn about the ecosystem. <ul style="list-style-type: none"> + Shift 1: class 6/16 + Shift 2: class 6.18 + In the afternoon: Discuss (the fourth session) how to do sample plots. <ul style="list-style-type: none"> + Period 4: class 6.16 + Period 5: class 6.18
	January 10 th , 2014	fieldwork	fieldwork
	January 11 th , 2014	fieldwork	fieldwork
	January 12 th , 2014	break time	break time
22	January 13 rd , 2014 January 17 th , 2014	<ul style="list-style-type: none"> - Prepare plan for summarizing reports. - Give group points and individual points of the project. - Resolve difficult questions of the group. 	<ul style="list-style-type: none"> + At home: <ul style="list-style-type: none"> - Students perform project with such content. - Complete homework of Literature and Geography. - Finished group send to teacher to correct.
	January 18 th , 2014	<ul style="list-style-type: none"> - Give group points and individual points of the project. - Resolve difficult questions of the group. 	Students finish products.
	January 19 th , 2014	<ul style="list-style-type: none"> - Give group points and individual points of the project. - Resolve difficult questions of the group. 	Students correct products
23	January 20 th , 2014	<ul style="list-style-type: none"> - Give group points and individual points of the project. - Resolve difficult questions of the group. 	Groups finish products, bring them to class in other to teacher check and prepare reports.
	January 21 st , 2014	<ul style="list-style-type: none"> - Check groups' products. 	Groups finish products, bring them to class in other to teacher check and prepare reports.
	January 22 nd , 2014	<ul style="list-style-type: none"> - Check groups' products and try running the program on the computer. - Prepare the tool for the report. 	<ul style="list-style-type: none"> - The reports of the groups are complete. - The groups rehearse report. - The groups send representatives (four students each group) to the hall to prepare position of report and

Week	Time	Teacher's activity	Students' activities
			decorations.
	January 23 rd , 2014	- Prepare for a summary report (arranged seats, decorate, ext.)	Project completion Report Period 4 + 5
	January 24 th , 2014	- Completion of the project. - Meeting to withdrawn experiences	Inform points

IV. METHODS:

- The report of biodiversity topics: method of vivid visualization, exchange, discussion.
- The learning about ecosystem: method of experimental practice, method of hand molding powder.
- The biodiversity lesson: sampling method, analysis, discussion, group presentation.
- The lesson of creatures' camouflage: method of group games, group discussion and group presentation.
- The lesson of measure the average temperature: method of experimental practice, group discussion.
- The report of the project: methods of group notes, introduction and convincing.

V. PERFORMANCE:

1. How to perform:

- The activity of teaching fieldwork not only has the purpose of education biodiversity but also trains a number of practical skills; so the ways which the teacher perform, are divided into two parts: on-campus activities and practice in the nature in Cat Tien national park. And with the combination of subjects: Geography, Literature, and Civic Education to rate and give points to students.

- For Biology:

+ School Activities: before going fieldwork, students are joined in activities include the following contents:

- Watching movies, listening to reports to introduce biodiversity, causes of biodiversity decline, the harmful effects of reducing biodiversity.
- Practical experiments to understand the role of the plant and ecological activities (experiments 1, 2, 3, 4). Special, vegetation helps prevent erosion and restrict floods, drought. The body of tree transports substances, so it helps reduce toxic emissions. Plant restricts floods, droughts and stable groundwater. Soil filters the water; prevent pollutants to reduce toxic emissions.

+ Fieldwork activity: When attending fieldwork activity, students will approach nature and clearly understand the role of forest and vegetation on the stability of ecosystems and the natural environment.

- When going fieldwork to Cat Tien National Park, on the way students are guided by teacher to learn a number of industrial plants' features, some characteristic plant of regions such as rubber, cashew, tobacco, coffee, high-yield wheat, ext.
- At rubber forest on the Dau Giay, students are participated in activity of biodiversity by doing sample plots, collecting the species in sample plots with different areas and playing game of animal prey. Students are also participated in game of creatures' camouflaged; through games, students understand the meaning of the creature's camouflage in their habitat.
- In the Cat Tien National Park, students continue practicing biodiversity lesson in the forest. The second sample plots were prepared along the walk route in the forest edges. Students can visit the forest habitat, they understand some plants which were distributed in tropical rainforest; they visit the Tung tree, Si tree. They understand the role of the stream to the plant and animal. They understand the stratification of the forest and characteristics of five forest habitats in Cat Tien (broadleaved evergreen forest, semi-deciduous forest, mixed bamboo forest, pure bamboo forest, and wetland vegetation). When walking on the main road, teacher can explain to the children: the human's impact has changed the landscape and vegetation. Students also understand the value of the rare plant species and many other species which have served human life from past to present.
- Students understand that the climate in the forest is cooler than outside, thanks to the role of vegetation: suck CO_2 , release O_2 and water vapor during the process of photosynthesis, cool plant (release water vapor to create suction from the roots to treetops), create humidity, so the air in the forest is cooler than outside. This evaporation will contribute to increase water vapor in the air – creates stable rainfall and ensures cycle of water circulation. This helps students explain why the areas with more vegetation, forest will have more rain and higher humidity.
- Through this program, students will recognize that the role of plants for human life, the benefits of biodiversity for ecological environment and economic life of man. In the city, student can launch movement of planting tree in campus or voluntary join in afforestation program, ext.
- In the discussion, it will have many questions concerning how biodiversity is, why should protect biodiversity? To contribute to the protection of biodiversity, being the citizens of the city, what will student do?
- In the evening, students conduct group discussions to analyze and compare the biodiversity in two places: rubber forest and Cat Tien forest. Thereby, the students conclude the species diversity in the two environments and understand why there is the difference.

Students discuss to summarize the role of forests. Teacher educates the importance of forest protection, protection of biodiversity and the ecological reserve. Students discuss the solution to protect biodiversity. Then students experience a tour of visiting animals at night. Here, students can observe some animals such as deer, wild boars, owls, etc. and hear guides introduce about their lives.

- Students feel the air and the sounds of the jungle, this is different in the city. The students join in sport activities of the class, the students feel the way to live harmony with their friends, take care of themselves without their parents.

- In the end of fieldwork trip, back to school, students finish the project report. The groups lucky draw the content of the group assignments. They write "trip diary" to save the memories with the class.

- For Geography: When visiting, students can understand:

- + Geography in Ho Chi Minh City, geography in Cat Tien National Park (in Dong Nai).

- + Students observe wind energy, review knowledge of lesson 12 about volcanoes, volcanic structure; the problem of urbanization in countryside and forest.

- + The factories, industrial area have caused environmental pollution.

- + The monoculture in agriculture.

- + The type of cultivation after deforestation in hilly terrain.

- + The aquaculture in La Nga river and yeast factory in La Nga river influence water quality in downstream of Dong Nai River.

- + (Km 125 - Cat Tien): Model monoculture on hill land.

- + The role against erosion of trees on riparian: area near Tuong Mountain.

- + Students do exercises to measure the average temperature during the day in two places: in the classroom and in the forests of Cat Tien. Thereby, students develop practice skill and discussion, analysis problem skill. Therefore, students better understand the role of vegetation in regulating climate. (View report below)

- For Literature: through actual observation as fieldwork in Cat Tien, students write essays of describe a species of tree that students love. Students can feel the essay "the Ca Mau River" in the curriculum.

- For Physics: thanks to learned knowledge, students apply to graph charts of describing the correlation of plant species and sample plot size.

- For Computer Science: apply knowledge of Power Point, students do project report.

- For Civic Education: when living and learning in collective, each students train many value virtues which were educated in the classroom, such as solidarity, living in harmony, simplicity, politeness, delicate, nature-loving, positive in group activities.

How to held classes: each class was divided into 8 groups of 5 students; the number of boys and girl are equal. Each group with its rate of good student is equal. Each group in class 6.16 and each group in 6.18 create large groups with the number of 10 students each group.

- When learning, class will discuss in large groups. Each large team has one leader of the class 6.16 and one deputy leader of the class 6.18 or vice versa.

2 Duration: Before, during and after the trip from 12/23/2013 to 01/23/2014

IV. RESULTS - PRACTICAL APPLICATION:



January 10th, 2014 Get fieldwork at the rubber forest.



January 10th, 2014. Do sample plots to learn biodiversity.



January 10th, 2014 Explore about creatures' camouflage through camouflage-games,



January 10th, 2014 Students visit Dao Tien to hear guider present about primates.



January 10th, 2014. Students communicate with foreign specialist about reserving primates.



January 10th, 2014. At night, the groups discuss about biodiversity of tropical rainforest.



January 10th, 2014, at night, the groups sum up biodiversity.



January 10th, 2014, the groups present and comment about biodiversity of tropical rainforest.



January 10th, 2014, Students visit animal at night.



January 11th, 2014, students visit Si tree.



January, 11th, 2014, Students and teacher took photograph at Si tree.

Ngày 23/1/2014. Lớp 6/16 trưng bày sản phẩm.



January 23rd, 2014, the groups present the reports: “biodiversity in tropical rainforest”

Ngày 23/1/2014. Lớp 6/18. Báo cáo.



January, 23rd, 2014, the groups present reports in class.

VII. FURTHER DEVELOPMENT:

- Now, our school will be building a program of fieldwork for each grade in order that students can continue joining the next school year. Therefore it helps them continue to

promote learning qualifications, train skills of subjects, the necessary skills for the twenty-first century students.

- Our school has conducted fieldwork for 3 years, has applied for 3 grades: 6, 7 and 8. In school year 2014, the school continues conducting for students of grade 9 with program: to learn the ecosystem at Tram Chim national park in Dong Thap province.

- Framework programs of fieldwork for the following grades:

Grade 6: To explore biodiversity of tropical rainforest of Nam Cat Tien.

Grade 7: To explore Marine and Forest Ecosystems at Nui Chua National Park

Grade 8: To explore Ecosystems at Lo Go Xa Mac National Park.

Grade 9: To explore Ecosystems at Tram Chim National Park in Dong Thap province.