

Theme-based Geography Education As an Effective Method of Teaching

Phase One: The Room

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Preface

This portion of Theme-based Education concerns the physical room, which I call “The Geography Laboratory” and is designed for teachers, for school administrators, and for parents. It is presented here so that we teachers can create an optimal learning situation for our children. By using geography as a unifying theme I believe that we can be effective proponents of a meaningful and productive teaching methodology.

As we set up our geography laboratory, keep in mind that we are trying to create an atmosphere that is both pleasing and inspiring, pleasant to be in and uplifting to the spirit. We want to create a pleasing location because our students look forward to coming to our room and will receive good associations and positive memories from the geography laboratory.

This is also the room where we will spend the greater portion of our working day, and we too want it to be a pleasant experience and a source of inspiration. We do not wish to fight the room as well as the bureaucracy, and the discipline, and the weather, and the traffic, and so on. Make it as easy as possible for the student and the teacher to enjoy the geography lesson. The room must be pleasing to everyone since this combination, teacher, pupil, location is one of the most important ingredients in the formula for good education.

Even as we teach, we learn

Introduction

The physical environment is an aspect of teaching that impacts the way our children perceive their education and it flavors their outlook on life. Where they receive their schooling matters. And so too, do the daily surroundings where they are taught the rudiments of geography. We are going to focus first on the room together with its layout and contents where geographical skills are imparted.

The Geography Room

The geography room must be the most pleasant, lived-in room in the school not only for the students but also for “we” the teachers. For after all, we will spend a good portion of each day in this room. Acquiring the ideal room may not happen overnight, and we often have to apply concerted pressure on school authorities to achieve these goals. This is the place where geographical skills, knowledge and competence will be conceived and delivered. The geography laboratory is a place where students meet, a place where they can feel welcome and safe in an inspiring atmosphere of learning. This can be their home base; the home away from home.

Let me begin by outlining what we should strive to avoid. Stay away from dull, monotonous rooms with poor lighting, dingy, claustrophobic atmospheres and sad teachers. The last thing we want to convey to our students is that geography is dull, drab, repetitive or claustrophobic. With that in mind we can design a work room, a living room, a study room, and a play room (because all these elements are going to be there in varying degrees) that is going to be our geography laboratory.

Establish one room in the school as the geography laboratory. Call it just that, and on the outside of the door print in great bold letters the following name plate:

THE GEOGRAPHY LABORATORY

Let there be no doubt in people’s minds about the purpose of this room. This is where we are going to conduct the lessons that will impart the necessary skills and values to turn out great geographers.

It is equally important to establish this fact for the students as well as for the rest of the staff, who may not yet be prepared to grant geography its rightful place in the school curriculum. Very soon every student will know what goes on in this room and once we have set the train in motion it will carry on under its own impetus. The geography laboratory will be accepted throughout the school, just as the science lab and the language labs are intrinsic parts of the school life. The effect will be cumulative and in a short time, what usually occurs is that geography will have a higher profile and more attention and facilities will be granted to it and to the teacher. The establishment of a physical location will result in its prominent planting in everybody’s collective mind.

Once the room is established, it is vital that no mixed messages are sent about geography by encouraging the teaching of other subjects in that room. We do not learn physics in the language lab and we wouldn’t expect to learn French in the science lab, so we shouldn’t allow the opportunity for other subjects to introduce retroactive inhibitions to our geography laboratory. The students do not need to associate the trauma of Shakespeare or the humor of Homer with the geography laboratory. We must be prepared to wage this battle for a time until the last vestiges of social studies, as we know it today, have been eradicated from the school curriculum.

Natural Lighting

The geography laboratory should feel like a special room, where good things happen. The student should feel welcomed, warm and inspired by the layout and the atmosphere. With this in mind, choose a room that commands an uplifting view amply displayed with large windows. Many teachers shy away from rooms with large windows - citing distracting views, so we should not have too much trouble acquiring the kind of room we want. Natural lighting matters and is conducive to a positive outlook.

Some teachers hesitate in the belief that the pupils might constantly look at the view and consequently may not pay attention to their work. Better they attend to that view rather than suffer boredom at their work! If the geography class is boring

then we are not teaching geography or we are using the wrong method. And if we are boring our class it doesn't matter what view or distraction they will seek, to avoid it. It is better that we have a view to compete with rather than lose-out to a fly crawling up the inside of a dull pane of glass.

The key, of course, is to prepare and conduct classes that are anything but dull and conducive to staring blankly through windowpanes. It is better for the student to dream in verdant gardens than stifle in dull drudgery. When geography is taught to its peak, we ourselves will cherish the views, lest we interrupt our students who are working feverishly in the background. And all the while, we will have a class that is inspired and creative because we are in rich and pleasant surroundings.

The Physical Layout

Choose a room that has a particular aspect that can be turned to advantage. I once had a geography laboratory that comprised the width of the top floor in the middle of the building. It faced east west with a door that lead up to a flat roof. It was an ideal geography laboratory. It sported a great view over the playing fields and the meandering river beyond, and on the other side, the city climbing up to the ridge upon which we could see the airport tower.

From our vantage point we monitored the sunrise each morning and in the short winter days watched it sink to the horizon. It was possible to track its apparent progress from tropic to tropic throughout the year. On cloudless nights we set up our telescope on the roof and observed the moon, the stars and the planets. We talked about Ptolemy and Copernicus. There were many enthralled nights observing lunar eclipses and we shared our learning in an adventuresome spirit. I was sad to leave that geography laboratory when I moved to another school and I never had one as ideal as that again. But we learn to adjust and use the facilities at our disposal to the best of our abilities. It pays to be creative; think about ways to improve the outlook from a geography learning point of view.

Decor

Paint the walls a bright, comfortable hue and when that is not possible, cover up unsightly patches with colorful maps, charts and displays. I will never forget my dismay one September, when I returned to my lab from a European vacation only to discover that the principal had done a 'deal' with some past pupil who needed work, claiming that he was a painter.

The resulting artwork was, to say the least, stunning. "Disaster" was my word to describe the scene when I walked through the door of my lab and was greeted with the ghastly, green color on the walls. The deed was done and I was forced to dig up all the maps, charts and photographs I could find. I proceeded with the 'cover up' with colorful magazine pages, scarves and coats, artwork and plants. Soon it was impossible to tell that a not-so far-sighted pecuniary principal had nearly sabotaged my year. I enrolled the help of some of the students who lived nearby in rescuing the lab, and it turned out to be a great adventure and a remarkable recovery so early in the school year. Use artifacts and clothing from different parts of the country and the world so that the students can look, see and touch for themselves.

The Blackboard

Have some permanent fixtures in the lab, like a bookcase for the reference material and a sink to carry out simple experiments and to water the plants. On one wall hang a permanent blackboard even if there is access to mobile boards. Chalk and talk is still a very valid media for instruction and one that can be used to skillful effect quite easily. The blackboard is still an effective tool with which to teach meaningful lessons and impart knowledge, skills and values.

I strongly believe in minimal and selective use of the blackboard. Never mix concepts. Before beginning a lesson erase any old 'leftovers' to get rid of potential distractions. A "Tabula Rasa" will insure that there are no retroactive inhibitions remaining from a previous class or individual. As a mark of courtesy to the next teacher it is a good thing to erase any writing and dangling stray concepts that

were growing in the geography laboratory during a presentation.

Write neatly and use the space well. Don't write in a haphazard manner, diagonally, up/down and around corners, unless doing so constitutes a pertinent part of the lesson. Once a particular concept is finished, clean the board. By using the board sparingly, and introducing only one concept at a time, the blackboard will be an incredibly effective teaching tool. But, like all tools, if we are sloppy and inattentive to detail its effectiveness together with our teaching prowess will be diminished.

There is nothing as bad as looking at a blackboard after school is over and seeing it overflowing with mixed concepts and ideas, bits of words here and semi-erased phrases there; a veritable cornucopia of nonsense. We have all seen this in schools; a fraction of math in one corner superimposed on a flower pattern, merging into some Spanish that abuts a scientific theory. Imagine the effect of this splurge of information on young, inquiring minds in their formative years! Used properly, however, the blackboard is a viable and profitable teaching tool and a valuable asset in the classroom.

There are a plethora of other boards that can be in the lab to supplement class presentations. Each one has associated good and not-so-good elements and it is important to be aware of the merits and limitations. Carefully select the one that best suits the purpose.

Furniture

A fresh, innovative atmosphere can be achieved with a thoughtful arrangement of the classroom furniture. The Geography Laboratory is a room in which our students take ownership and pride -a place that fosters learning.

Tables are useful, rather than desks, because of the utility advantage of the flat surface. When they are arranged together in groups of two or more a perfect work space is attained for conducting projects, group-work. It is perfect for doing detail work on large maps.

Provide a desk and chair for every individual. This is important. Help foster self esteem, confidence and security.

Anticipate motivation and interest by training the students to expect different teaching methods associated with a particular desk arrangement. For instance, if the desks are aligned in parallel lines it could signify a quiz. If they are arranged in groups of four it might suggest project activity, and if they are set up around the perimeter it could point to a debate or a field excursion.

Teacher's Desk

Where do we position the teacher's desk? It is worth giving this question some serious thought. It is both the epicenter for introducing new material but it also serves as the students' sense of security. It is important to place it in a neutral, accessible spot and then leave it there. Make it a permanent fixture and the students will know where to find the teacher when they need attention, a kind word, or a smile.

It is vital to build up respect and trust with the students. Then we do not have to waste time policing them. If we begin by policing them, we will be forced to spend increasing amounts of time following up and chasing them rather than teaching. And they, in turn, will expend increasing amounts of time devising more sophisticated ways to elude us. If there is trust and respect, this problem is circumvented. We cannot demand respect, we must earn it and the way we set up our room and go about our business of teaching helps win that respect.

The teacher's desk is a wonderful opportunity to create a pleasant, friendly haven in the school and a place that the students will come to appreciate and enjoy as time goes by. The desk will quickly become the pivotal point of communication and learning so that the spirit of cooperation and trust is fostered and maintained.

This is the place to install a favorite globe and perhaps a 3-D map of the local area. The raised features will offer the students an opportunity to touch and feel the mountain ranges and see the valleys. If their homes are marked on the map, it provides an added attraction and a perfect model for the instruction of maps. The geographer should be surrounded with the things of geography. Education is that wonderful two-edged sword.

Some teachers like to have raised platforms on which they place their desks, and that's OK, if the teacher is short. But, I prefer to look across, rather than down, at my students. I think it is a prerequisite in the development of trust and respect. The classroom should be a center of learning, a cooperative quest for knowledge. We must be fair and consistent in our dealings with the students and it will do wonders for their self-esteem and for our own peace of mind.

Educare, from the Latin means to 'lead out' – it doesn't mean to fill up. We do not view each student as an empty vessel to be 'topped up' with culture and knowledge; rather, each student must be provided with a suitable environment in which to grow and develop as they learn new and exciting things. And our geography laboratory can be that place.

Audio-Visual Equipment

Every geography laboratory should have some fixed basic equipment to make class presentations lively and exciting. Choose daylight screens that are used with overhead projectors and regular screens that can be used in the dark (to show movies etc.) The overhead projector is a very practical teaching tool. Unfortunately, people who have traditionally used the chalkboard, often overlook it. The main advantage of the overhead projector is that the teacher can face the classroom while the image appears on the screen behind.

It is essential to be able to turn our well-lighted room into a darkroom for slide shows and movies. I've been in 'dark' rooms and 'not-so-dark' rooms, and rest assured that it is better to have none, rather than a shoddy attempt at darkness. We are asking for trouble if we try to show slides that cannot be seen because the room is not dark enough.

Let me add that there is such a fantastic quantity of relevant material available, that no student should have to go through school without seeing meaningful images of volcanoes, glaciers, deserts, rivers and other natural features of the biosphere. Teaching physical geography can be so easy when we make good use of the available media.

Naturally, there are some 'do's' and 'don'ts' that accompany darkroom presentations, but care-

ful preparation will insure a perfect result every time. Avoid prolonged periods of no-action, while we frantically fumble in the dark to arrange the slides into the projector - upside down and back-to-front. And hang on to the remote control, unless one of your students can be trusted to keep focus and change the slide at the appropriate time. Don't show too many slides, just because they are there. Use the material appropriately to develop a point or to prove a theory. Avoid overkill!

Teacher – know thy media

We should practice with each piece of equipment until we are comfortable, before we attempt to use it as a teaching technique in one of our lessons. It is always a good idea to have seen the movie beforehand lest we discover some surprises at the wrong time.

Know the audio-visual equipment so that we will be able to supplement our teaching with entertaining and colorful aids to good effect. I cannot stress enough that preparation is the key to audio-visual lessons. It is even more important now that class times are so short. Talk to the other teachers. Find out beforehand if someone else is planning the same type of instruction that day. Try to be fresh and innovative. The students may already be fatigued with audio-visual motifs before we even begin. This is a sure recipe for imminent failure and unavoidable disaster.

Build up a solid collection of videos and slides that have worked over the years, so that class preparation is not always an impossible chore. Be prepared to loan the videos out to the students to assist them at project work at home. The reference library should contain books, videos and maps that relate to the work at hand. Let the material be accessible to the classes so that geography is portrayed for what it is - a living, utility subject.

Internet Geography

Stay abreast of software and hardware innovations so that the students will have access to

the Internet and the magic of interactive geography. We should be part of the move to keep our students in tune with state-of-the-art technological advances. There is a host of excellent programs and interactive software available from the National Geographic Society and elsewhere, that makes geography on computers a fun experience and a meaningful learning activity. Once we get connected into the computing geography network it will grow exponentially and our students will be continually challenged and extended.

Maps

There should be a solid and growing collection of maps in every geography laboratory. The ideal piece of furniture is a map collection drawer-stack along one side wall. Here large maps and charts can be stored without having to fold and crease them. The collection should contain black and white as well as color maps and should also contain geologic and meteorological charts. The maps should personify different scales and display regions - local, national and international.

Use maps in every aspect of geography teaching. It is important to take care of them. Do not fold them, rather place them flat in the large drawers and they will last longer. Ask the students to only use pencils when they are working with the maps and to use care while leaning over them lest the edges get tattered and damaged.

Try to instill a sense of respect for maps and atlases from the beginning and the geography laboratory will not have a bedraggled look after a term of use. In addition, we won't have to spend school funds in replacing equipment; funds that could more profitably be used to expand our presentation materials.

When the students develop a sense of ownership for the lab and its material they will be more likely to care for it and respect it. One of the most valuable skills we can impart to our students is the care and protection of their maps. Teach them how to unfurl and re-fold the everyday street map that can be purchased at most gas stations and supermarkets. This is a very worthwhile and useful skill. Too often street maps are tattered not with use but

as a result of mishandling. They are then a source of frustration instead of information, and lose their value when the seams become illegible.

There should be sufficient copies of each map to go around. That means that if there are twenty-four students in the class, pass out twenty-four maps, one for each student. Otherwise pass out twelve maps, one for each couple working together. It always seems to work out that the same individual ends up without a map each time. We avoid this by careful planning and by being aware that there might be a shy or a tired child in the room.

Let the students see and touch maps. This may seem trivial but is very important. They should note the scale and the color schemes. They should also learn to recognize symbols. Basic map skills are essential for everyday living but in addition they gain a broad preparation in a new and developing technology field.

Do-it-yourself Furniture

There are many ways to achieve a sense of belonging and ownership in the geography laboratory. A good way to begin is by building something of value for the lab as a project with the students. Every geography laboratory can benefit from a good tracing table – inexpensive and easy to build. Here is a story of a class that made their own furniture. They started out to make a simple tracing table, but they added a display counter for their collection of rare minerals and “erratics”.

The tracing table was to be a broad flat translucent surface where the students could trace a map onto blank paper. Their initial design called for a plain table, with four legs and a flat top. Their plan was to add a six-inch wall all round, and finish it off with two strip lights in the box and a clear sheet of glass on top. Simple!

Flushed in the throes of victory and accomplishment, one of the students pointed out that they had just invented a 'cool' place to display the rock collection that was locked away in the teacher's drawer. And so, they set about arranging the minerals and rocks, each with a label and descriptive note and carefully arranged them on the floor of the tracing table. It turned out that there was a geology

sample from many places in the United States and from around the world.

They had petrified forest from New Mexico, Iron Pyrites from Oregon, Galena from Spain, Carrara marble from Italy, granite from a local quarry, white Chalk from England's cliffs of Dover, pumice and volcanic ash from Mt. St. Helens, and East African finger-coral from Mombasa.

There were others. But the best part of this story was how the students took ownership of the project, the rocks and the idea. It wasn't long before a child returned from a trip and remembered to bring a souvenir for the geology collection in the geography laboratory. Nothing promotes success, like success.

Soon there were too many samples to fit into the tracing table and they elected to change the display every other month. The students could look with pride on their contribution and share the wonderful memories that they brought back from their trips and vacations. Geography had a real-life purpose for them and it was fun, exciting, and uplifting. That table never needed a lock; it was never interfered with, and served as a true example of living geography and student involvement in their school.

Wall Displays

The same applies to wall displays. There are many advantages to having colorful displays on the walls. First focus on a theme, and change the display periodically to reflect the new focus. A good idea is to dedicate a section of the display to daily issues that can be updated every morning with current news events pertaining to the school and the class. This gives the students a sense of belonging and involvement. We should also have a national and an international section. Once a month, display physical, political, climatic maps, charts, and pictures of people and scenery. The objective is to allow our students grow familiar with the environment and living-conditions of people in other parts of the world.

Preserve a portion of the display area to focus on a particular topic that we are teaching on a particular month. This maintains a formal image in front of the pupils and assists in class motivation and preparation. Displays brighten up a classroom,

they help motivate the pupils and they promote interest and curiosity in the subject.

*Exploit a student's natural curiosity
with colorful displays*

Student's Work

Finally, there should be a portion set aside to display the results of the student's work, events and projects. This is the vital link that fosters self-esteem and a positive sense of achievement. This, in turn, leads to motivation, interest, and learning. It truly builds on the respect and trust that is so effective in a smoothly run class. Display each student's work liberally and with much praise.

Always praise the effort, even if you know an individual could do more. Then help that student to do more. But let them associate good work with praise and not with punishment. Show all pupils equally. Do not fall victim to the fallacy that if you display only the best projects that everybody will see how good your class is. Be fair and proud of all your students equally and they will respond a thousand-fold to your attention.

Show their projects, their photographs, their essays, their prizes and their test results. Show anything that will make them look like the kids they are. In this way, we can be assured that our walls will be living evidence of our teaching brilliance and proof that our students are happy individuals.

The river

I will never forget a fateful project that developed one year in my geography laboratory. We had been working on 'Rivers' for a week, but the truth was that I was up to my proverbial waist in alligators because there were just too many concepts and abstract ideas for a class that wasn't all that bright, just energetic and inquisitive. There was a major river running through our city, but it was in its old-age stage and was sluggish and smelly and dangerous and I was not prepared to risk the consequences of taking this class of fourteen year-olds to the banks of such a trap.

That left no alternative or so it seemed at first, but to resort to slides and books and diagrams on the blackboard. But I had learned that I should use the things that are geography in the teaching of geography and I wanted to avoid using second hand substitution wherever possible.

*Use the things of geography,
in the teaching of geography*

I knew that I could arouse their interest if I could let them see a young river valley, with interlocking spurs, rapids, and braided streams, but where was I going to get the likes of that at short notice?

So I resolved to build our own river in a 'sand box', right there in the geography laboratory. At first they were disbelieving and thought the project impossible. In truth, I did too. But I certainly had their attention and the construction of the river was the talking point of most of their conversations for the next week, a fact attested to by both the woodwork and the science teacher who were smiling, tongue in cheek, at my naivete.

The first thing we did was build a waterproof box in the dimensions that suited our lab. It turned out to be a pretty big box - eight foot long, by three feet wide and a foot deep. It looked like an enormous coffin and the word was out all over the school that something devious was afoot in the geography laboratory. Rumor had it that we were about to bury the French teacher. We filled it up three-quarters full with sand from the nearest beach, which was twenty miles away. Do you know how many bags of sand a box that size can hold and can you imagine how heavy each soggy bag can be? It definitely got their attention as we hauled them up the three flights of stairs to the geography lab!

We needed a supply of water to start our river and we needed an estuary to drain our river - two pretty obvious items when we are dealing with rivers. So we set the sandbox up high enough to drain into the sink and that was good because it was now at about the right level for a viewer to look in over the side at the action. We attached a hose uphill as the source and drilled a hole in the other end to

be the ocean. We didn't want our river to overflow onto the floor and down to the French lab below.

Finally, the big day arrived and everything was in place. The sand was built up in picturesque mountain formations and 'rain' was forecast by our meteorological division for about two o'clock in the afternoon. All the students were excited and the dignitaries (including the science teacher and the woodwork teacher) having arrived, the 'river' was turned on.

What a disappointment! I should have known. Nothing happened. There were over forty anxious people, including the principal, the French teacher and the rest of the staff, staring fixedly at the water disappearing into the sand. Eventually the 'estuary' filled up creating an ugly, soggy mess and began to pour out, sand and all, down the sinkhole. I was mortified. The principal leaned over and turned off the water to save the plumbing bill no doubt, since the sand was already clogging the drain. Then he left quietly - as only principals can.

Back to the drawing board! Why was our river not working; did we not have the essential ingredients in their correct places? The 'river' became the centerpiece of the lunchtime conversation for weeks, much to my embarrassment. I learned an important lesson from all this - I learned never to invite anybody to witness an unveiling again.

Each day I tried something different and each day the same result would transpire - a wet, soggy mess on the floor of the box. We were about to give up when the miracle happened. A visitor came to the school, an elderly inspector, who was monitoring the progress of some young teachers. He too was told about the 'great fiasco' in the geography laboratory and he was immediately captivated by the experiment. It turned out that he had been a geography teacher in his day, and had often thought about generating his own river. He spent all day watching and 'playing' with the flow and finally he came to me and said. "I think we need to raise up the mountain end, so that there is a real slope for the river to develop." Remarking the use of the royal "we" I thought that this novel approach was as good as the other novel approaches we had already tried. "Something to do with water table," he mumbled by way of justification. Then I realized that the thing weighed nearly a ton, especially since the sand had

become waterlogged.

There was nothing for it, but to procure some plastic bags and a shovel and begin again. That day after school, the inspector, who had just about taken up residence in my lab, about half the class and I donned our old clothes, emptied the box and raised up one end to a height of about six inches. Then we poured the sand back in and recreated our mountains. We were ready to try it again.

The result was dramatic, even better than any of us had imagined and even more effective than if it had worked from the very beginning. Naturally, it became the highlight of the school year. As we watched we saw developing before our eyes a river valley take shape in its youthful stage, then move down to the lowlands and spill into a beautiful estuary through a perfectly shaped alluvial fan. It was incredible and everybody was awestruck by the unfolding features. We left it flow overnight and in the morning there was a line of students and staff outside the geography laboratory door waiting for me to unlock it, so that they could see for themselves the source of all the excitement.

As our river developed and we began experimenting with it, new and ingenious modifications were introduced. One of my students produced a simple scissors jack (he swore that he got it from his uncle who had a used-car lot) and we were able to adjust the height of the mountain at will, to cause rejuvenation or unearthing of rias by raising or lowering the bedrock. We also drilled other outlets at different levels in order to control the level of the sea and in this way we were able to demonstrate isostatic recoil, raised beaches and drowned river valleys.

We added rocks and cliffs and houses and trees, all to scale and the river took on a personality of its own. Some students put model animals in the fields, others tried to wage war with toy soldiers, and the river was always a busy place. Another student took great pride in developing a little mechanical device that created waves for our ocean and it gave real effect to the beach areas.

It turned out to be a wonderful project even if I had more gray hairs when it was over, and one that I certainly won't forget. I know too, that the students look back on those days with delightful memories and I know that they understand rivers.

We don't have to get carried away with 'do-it-

yourself' projects to be a great geography teacher but I must admit that, in retrospect, we had a lot of fun doing these kinds of project and we learned a great deal. I was able to build up a selection of tools and implements that were used over and over again to good effect.

Tools

Whenever a tool was beyond the range of the school budget, we had to improvise and sometimes invent a way around it. In order to carry out cross sections and beach profiles we needed a theodolite and poles, so we put our heads together and came up with an assortment of implements that worked well to achieve our ends.

We bought a number of five-foot broom handles and carefully marked off each foot. Then we painted the alternate sections so that it would be easy to distinguish - one foot red, and one foot white. We picked up a carpenter's square, a hammer (to act as a geologist's hammer), a level and a one hundred-foot measuring tape.

Fieldwork

And off to the beach we would go, armed (an unfortunate choice of words to describe this activity) with poles and tape, to play at geography. We drew beach cross-profiles, collected and split-open samples of indigenous and erratic rocks, studied the long-shore drift, listened to the sea while sifting through the driftwood that had washed up on the shore, lazed in the sun, and stared in peace at the sailboats and ships that drifted silently by. Geography was fun and we looked forward to the fieldwork.

The geography laboratory should have a collection of compasses to assist in the teaching of direction and bearings. A homemade weather station is perfect for the inquiring scientific mind. The students can conduct experiments, carry out scientific observation on a daily basis and learn to interpret signs. In a short while they will be able to predict the weather with accuracy and confidence.

The Outdoors

The geography laboratory can be the headquarters and the center of activity for a number of school clubs that relate to outdoor work and scientific experiment. The school astronomy club is a perfect example. Have a geography laboratory telescope to carry out observations, look at eclipses and other celestial phenomena. Every student should have the opportunity to look through a telescope to see the marvels of the cosmic spectacle in real life, the same way that Galileo did.

Similarly, the mountaineering club and the kayak club could have natural tie-ins with the geography laboratory since they will be experiencing at first-hand and underfoot, the feel and look of the features that we discuss in our classes. It is ideal for strategic alliances and tie-ins with other clubs and organizations like the camera club and the philately club. Geography can become more alive for our students when they have actual first-hand practical experience on the ground. This will help the students feel at home in the lab and insure that the lab has a central place in their lives.

*Geography can be learned through
the soles of our feet*

Since outdoor fieldwork and visits are an important part of every student's geography career, we should plan our teaching schedule carefully in advance. Because of potential disruption, and collateral time-tabling impacts, it is wise to plan for minimum upheaval and try to group two or even three periods together at least once a week. In this way we can arrange two hours or more in which to travel to a local site, carry out some fieldwork and then return to school.

Fieldwork is a necessary and basic part of teaching geography, and we should be familiar with all existing school policies regarding these activities, or assist in drawing up new and useful policies that can facilitate such teaching techniques.

Draw up a plan and devise a schedule for establishing a geography laboratory. Work steadily and consistently to make it the finest room in the school, a room where we are proud to teach and a room where our students are pleased to learn. Geography will become a real subject with a meaningful learning experience.

It is important for the geography teacher to receive rewards too. Think about training in methodology as it relates to the science of geography. Attend one of the summer schools in geography teaching methodology run by the National Geographic Alliance network. And enjoy the learning and teaching.