School Site Based Fieldwork

Bringing Geography to Life

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Why Is Fieldwork Important?

"Geographical inquiry involves students acquiring, processing and communicating geographical information. Through an inquiry approach students explain patterns, evaluate consequences and contribute to the management of places and environments in an increasingly complex world. This process enables them to apply inquiry skills including: asking distinctively geographical questions; planning an inquiry and evaluating information; processing, analysing and interpreting that information; reaching conclusions based on evidence and logical reasoning; evaluating and communicating their findings; and reflecting on their inquiry and responding, through action, to what they have learned. Engagement in fieldwork and the use of other tools including mapping and spatial technologies are fundamental to geographical inquiry."

Rationale

NSW Syllabus for the Australian Curriculum Geography

Why Is Fieldwork Important?

Fieldwork enables students to:

- acquire knowledge about environments by observing, mapping, measuring and recording phenomena in the real world in a variety of places, including the school
- explore geographical processes that form and transform environments
- use a range of geographical tools to assist in the interpretation of, and decision-making about, geographical phenomena
- locate, select, organise and communicate geographical information
- explore different perspectives on geographical issues.

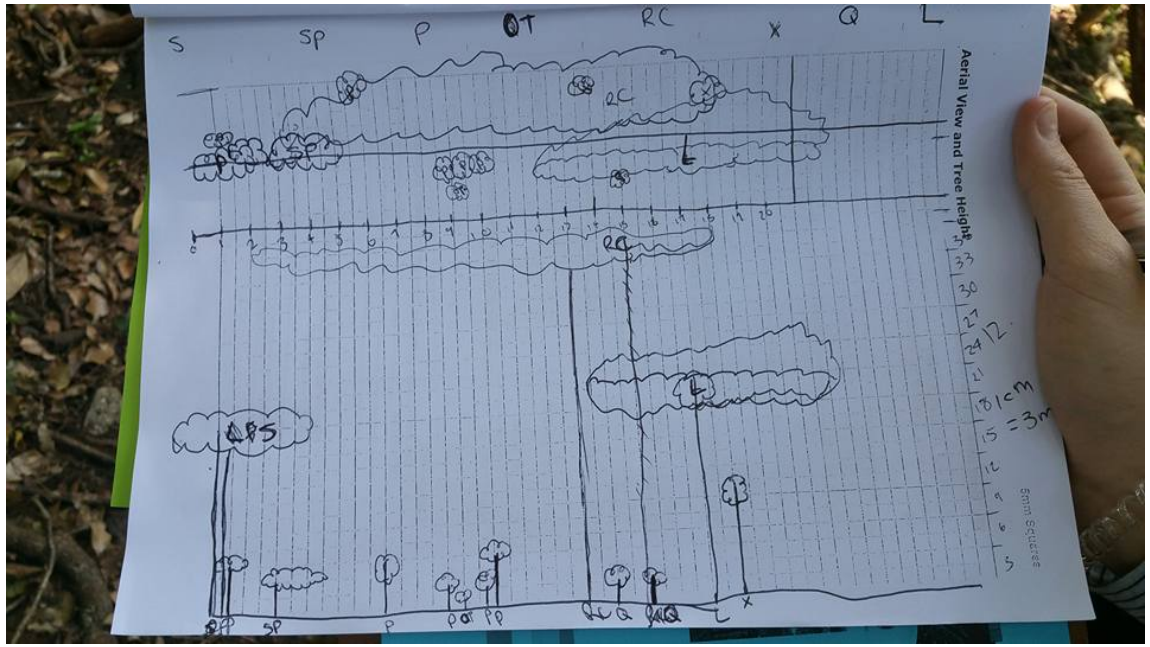
NSW Syllabus for the Australian Curriculum Geography

Why Is Fieldwork Important?

- Fieldwork activities should be carefully planned to achieve syllabus outcomes.
- It is essential that fieldwork activities are integrated with the teaching and learning program in order to take full advantage of the enhanced understanding that can be achieved through direct observation, field measurements and inquiry learning.
- Fieldwork activities may be specific to a particular topic or may be integrated across the Geography curriculum.
- Fieldwork should enhance the learning experiences for both students and staff alike

Fieldwork Opportunities Beyond the School Site

Fieldwork Opportunities Beyond the School Site



Fieldwork Opportunities Beyond the School Site

Model Making

Landscapes and Landforms

No-Cook Play Dough Recipe:

- **2 cup** plain flour
- **1 cup** salt
- **2 tbs** oil
- **1 cup** cold water
- **6 drops** liquid food colouring

STEP 1 - Combine plain flour and salt.

STEP 2 - Add water, food colouring and oil. Mix until ingredients are combined.

STEP 3 - Knead well.

STEP 4 - If consistency is too wet add a little plain flour.

Model Making

Landscapes and Landforms

Model Making

Landscapes and Landforms

Exercises to complete with this task:

- Make the play dough
- Create a landscape
- Pour water over and watch the drainage patterns (this could also be used in water in the world)
- Mark drainage patterns with wool
- Measure contours with toothpicks and draw on
- Create a topographic map
- Create skills questions
- Cut a slice of the play dough out to create a cross section
- Draw the cross section
- Change the vertical scale of the cross section to then start to introduce vertical exaggeration
- Start vertical exaggeration exercises

Fieldwork Kits

Become best friends with your science assistant!

Soil Kit

- PH Indicator
- Barium Sulphate
- Silver Nitrate Solution
- Barium Chloride Solution
- Peroxide Solution
- Hydrochloric Acid
- Square Ceramic Tile
- Test Tubes x 2
- Petri Dish
- Paddle Pop Sticks
- Instruction Sheet

Water Kit

- Phosphate Test Strips
- Universal Indicator/PH Test Strips
- Turbidity Tube
- Test Tube x2
- Thermometer

Fieldwork Kits

Weather Kit

- Wet/dry Bulb Thermometer
- Wind Meter
- Compass

Biosphere Kit

- Quadrant (1mx1m pipe)
- Measuring tape
- Species identification chart (of plant species found in the school ground – create using photographs)

Fieldwork Kits

Other Recommended Equipment:

- Compass
- Trundle Wheels
- Clip Boards
- Gloves (kids don't like to get their hands dirty!)

Bearings & Orienteering

Equipment Needed:
Compass
Trundle Wheel
Clip Board
Paper
Pen

Instructions:
Prior to School Based Fieldwork:

Cover content including directions, bearings and their uses.

Apply content in a classroom setting by measuring angles from North, using topographic maps, how to use a compass and trundle wheel.

Bearings & Orienteering

In 'The Field'

Take students into the playground, placing them into groups of 3.

Groups choose there own starting point, decide where they are going, measure the bearing they are walking on, measure the distance to the new location and then write down the first instruction on their sheet e.g. "walk on a bearing of 30 degrees for 50 meters. What do you find?"

I suggest only 3 or 4 locations then swap with another group, as they get the hang of it they can build up to around 10 locations.

Where this task will fall down:

No matter how often you tell kids they do not have super powers, they always seem to write instructions assuming the other students will walk around the building or garden etc.!

Syllabus link:

Stage 5 skills continuum – Maps (pg. 34) More suited to Physical Geography units (Biomes and Environmental Change)

Atmosphere Testing

Place and Liveability

Influences and perceptions – examination of environmental factors that influence perceptions of liveability
e.g. Climate

Context

Designed as an introductory task to ***Place and Liveability***. Relate this topic to the place and liveability of the school playground, where do people sit during breaks? What areas are empty? Discuss what influences the perception of each location in the playground. Mind map the students' findings on board. Do any environmental factors get mentioned? Climate may be an influence, eg hallways may get breezes, under a tree vs in the sun, behind wind blocks. Take students into the playground to test a number of locations that may be popular or not used in the playground. They can take atmospheric measurements to determine climate factors that may influence this and also take down observations of human features

Equipment:

Atmosphere kit
Paper
Clip boards
Pen

Atmosphere Testing

Place and Liveability

Influences and perceptions – examination of environmental factors that influence perceptions of liveability
eg Climate

Atmosphere Test Demonstration

- Temperature
- Humidity
- Wind speed/direction

Water Testing

Environmental Change and Management

Environments & environmental change – Investigate the function of the environment and investigate the human induced change

Context:

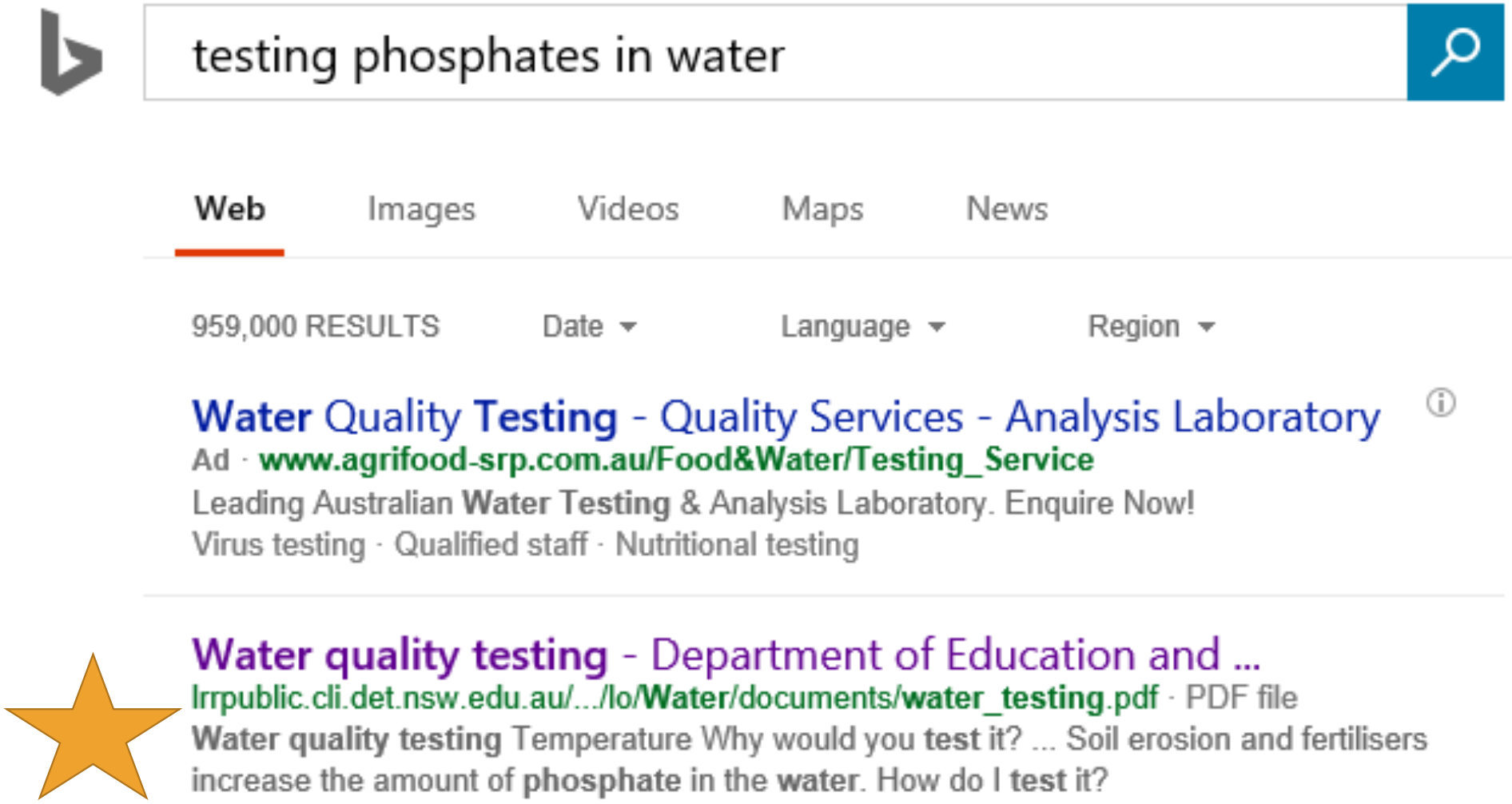
It may be hard to visit a watercourse, but a water course can come to the classroom. Take various photos from different angles, use also google maps etc of a local creek, dam, lake, river, swamp. Also collect some water samples from different locations and get someone to take photos of you doing so. In this section of the syllabus students are to understand the role and importance of a local environment and the way human are changing it, and then continue on to how to manage the environment. What better way then to start with a local case study. After examining the importance of the environment have students test the water from various locations to see if there are any human impacts present.

Equipment:

Water test kit

Pen

Paper


testing phosphates in water
Web
Images
Videos
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Language
Region
Water Quality Testing - Quality Services - Analysis Laboratory
Ad · www.agrifood-srp.com.au/Food&Water/Testing_Service
Leading Australian Water Testing & Analysis Laboratory. Enquire Now!
Virus testing · Qualified staff · Nutritional testing
Water quality testing - Department of Education and ...
lrrpublic.cli.det.nsw.edu.au/.../lo/Water/documents/water_testing.pdf · PDF file
Water quality testing Temperature Why would you test it? ... Soil erosion and fertilisers increase the amount of phosphate in the water. How do I test it?

Water Testing

Environmental Change and Management

Environments & environmental change – Investigate the function of the environment and investigate the human induced change

Water Testing Demonstration

- PH
- Phosphate
- Turbidity

Soil Testing

Sustainable Biomes

Food Production – investigate environmental factors influencing food production

Context:

Students are given a set of environmental conditions in which they must grow a lima bean seed. Variations can include amounts of sunlight, types of soil; garden potting soil, sand, clay, powdered charcoal, water or salt water, drainage, temperatures. Students predict what will happen to their seed based on the conditions they have been given. Over the course of following two weeks students are to gather data about the seedlings.

Equipment:

Soil

Containers

Additives e.g. salt, fertiliser, sand etc.

Soil testing kit

Seeds

Soil Testing

Sustainable Biomes

Food Production – investigate environmental factors influencing food production

Soil test demonstrations