



Technikon Northern Gauteng

# **Project oriented learning as a communication tool of environmental sciences in the community of Soshanguve - a case study**

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# Introduction



**Project Oriented Learning - involves communication between group members, tutors and the community**



**Solve or address real-life problems**



**Communicate and transfer knowledge, i.e. student centred learning**



# Project assignment

- Part of the subject Water Treatment Technology 3**
- Project assignment: contact a school in the Soshanguve area and develop a programme to communicate to a group of learners various water supply, water treatment methods, water quality and sanitation**









# Assignment objectives

- Project management skills**
- Life skills**
- Acquiring, applying and disseminate/communicate knowledge**
- Taking control of own learning experiences**



# Planning phase

-  **Contact Reitumetse High School**
-  **Grade 11 Physical Sciences learners**
-  **Venue and time**
-  **Resources and field kits**
-  **Set up a programme**
-  **Transport and refreshments**



# Implementing method 1

- 🎗 Presentation by each student group member**
- 🎗 Water treatment; water quality; water pollution; sanitation**
- 🎗 Interaction - questions, discussion, mini debates**



# Implementing method 2

- Ⓡ Field experiments - investigating acid rain; soil and water pH; temperature, nutrients, heavy metals, and the microbial quality of tap water**
- Ⓡ Hands on approach followed - collected water themselves and perform experiments themselves**






# Implementing method 3

- Ⓡ Pamphlets on water treatment distributed to each learner**
- Ⓡ Guide learners through these pamphlets**
- Ⓡ Discussion and question session on the relevant material**



# Assessment/evaluation

-  **Students evaluated on written report and oral report presentation to peers (video made of the presentations)**
-  **Learner feedback - pre and post test on basic knowledge transferred/instilled**
  -  **10 questions on basic water and sanitation issues**



# Assessment/evaluation

- 🚫 Students achieved all set project objectives**
- 🚫 Learners - increase in basic knowledge (from 15% to 86% )**
- 🚫 Letter from principal - “fruitful”; “explain to their classmates”; “impart knowledge to friends and families”**



# Conclusion

- 🚫 Work well as communication tool for environmental sciences - get students and learners talking**
- 🚫 Transfer knowledge through communication**
- 🚫 Impart life skills, communication skills, project management skills**



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