

# FLUVIAL PROCESSES

## **VAAL RIVER IN THE VREDEFORT DOME**

*An educational excursion & rafting  
trip for schools*

**Suits geography & biology groups**

Learners from South African schools come to Otters' Haunt on the Vaal for a day or an overnight stay. We demonstrate and explain river processes, using models and videos, then show typical features on the river. The highlight is rafting the river to experience the power of water & thrill of real adventure!



**COURSE CONVENOR** Graeme Addison is an author of books and articles on popular science, including two books on the world's whitewater rivers. He has lived on the Vaal for 12 years, researching and writing on the Vredefort Dome and the Vaal River – the only major river on Earth to flow across an asteroid impact crater. Graeme is former Professor of Communication at

the University of the North West and has taught journalism and media skills at various universities. In the 1970s he launched the first science writing course at Rhodes University. He is also a well known river pioneer, having established whitewater rafting tourism in South Africa.

**RIVERMAN**  
**DANCES WITH WAVES**  
Based at OTTERS' HAUNT  
WHITewater RAFTING  
& ECO CANOE TRAILS  
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## **WHAT THE WORKSHOP COVERS**

*We pick subjects to fit the time and level of learners*

### **TERMS**

*Free notes given to the group with glossary & diagrams*

### **WATERSHED**

*Describing a typical a river from mountains to the sea*

### **FLOW REGIME**

*How flows are measured, floods and droughts*

### **WATER QUALITY**

*What the river transports from nature and pollution*

### **EROSION & DEPOSITION**

*Rivers build and destroy, sedimentation and stratigraphy*

### **GEOMORPHOLOGY**

*Changing landscapes over time and role of rivers*

### **IMPACT CRATER**

*The amazing Vredefort Dome World Heritage Site*

### **RIVER OF THE CRATER**

*The unique Vaal with its islands formed in Dome granite*

### **WITWATERSRAND AND KAROO BASINS**

*The succession of river basins and their geology*

### **PROGRADING AND GOLD**

*How powder gold was deposited in the Wits basin*

### **ALGAE AND ORIGINS OF LIFE**

*Stromatolites, algal mats, oxygen and the Earth*

### **THE CARBON REEF**

*Gold concentrated by living things now fossilised*

### **RIVER SUPERIMPOSITION**

*Karoo system and the Vaal downcutting into the Dome*

### **STREAM CAPTURE**

*Birth of the Orange and the capture of the Vaal*

### **RIVERINE HABITAT SUCCESSION**

*Evidence of forests, glaciers, desert and temperate climate*

### **BRAIDING & ANABRANCHING**

*Bedrock, temporary landscaping and vegetation*

### **CREATURES OF THE VAAL**

*Why conservation matters and how to contribute*

### **THE VAAL AND OUR LIVES TODAY**

*Water supply and transfer, recreation and public health*

***On booking, we send a full TRIP BRIEFING explaining what to expect and how to dress for the walks and rafting.***

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