The design of an Australian Geopark

Example: The Glass House Mountains
Geopark

Geoparks are the storytellers of our planet and visited by a growing number of (geo)tourists.

A place where visitors explore how the earth was shaped and how it affected regional nature and culture.

Australia has a great geotourism potential.

Geoparks are a suitable tool for using that potential while keeping the focus on sustainable development.
Objectives

1. Protection of geological heritage

2. Sustainable development (geotourism)

3. Education:
   - geological hazards
   - climate change
   - sustainable use of natural resources
   - respect for the environment
Design

• Design with the help from indigenous Australians

• Aboriginal culture is one of the world's longest surviving cultures
  ➢ One of its aspects: all elements in the landscape were left by the Creation Ancestors, its appearance has a story to tell

• Look at the map of an area from the perspective of an Aboriginal storyteller: does the appearance on the map have a story to tell?
Glass House Mountains area

A connected area of parks, townships, reserves and forests creating a 'wild horse' shaped figure.

Wild horses use powerful kicks, often with both back legs at the same time, to ward off predators.

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WILD HORSE GEOPARK
Wild Horse Geopark …

• Link with the Glass House Mountains: one of the mountains is named Wild Horse Mountain

• Captive and distinctive design
  ➢ Useful for marketing activities
  ➢ Helps in becoming an individual famous brand

• Glass House Mountains: traditional land of Gubbi Gubbi & Jinibara
  ➢ Gubbi Gubbi language:
    horse = ‘Yaramana’ & wild or very angry = ‘Bangurran’
  alternative name: Yaramana Bangurran Geopark

• Makes a clear appearance on the map of Southern Queensland:
...or Yaramana Bangurran Geopark
The story of the Wild Horse is told in an entertaining manner by creating expeditions.

- Featuring hotspots (places where the story is visually illustrated for the visitor)
- Focusing on a specific theme or storyline
- Starting at an expedition gate, e.g.,
  - museum
  - look out
  - visitors center
  - sacred place
Expedition 1: ‘Volcanic hotspot’

➢ Theme: The origin of the Glass House Mountains

STAGE 1: ON THE MOVE
1. Start your geopark experience at the Glass House Mountains Visitor Centre
2. Get informed about the separation of the Australian continent from the Antarctic that started 85 mya
3. See the resulting drift of Australia to the north

STAGE 2: VOLCANIC Eruptions
1. Understand the effect of a tectonic plate crossing a hot spot
2. Imagine the impact of volcanic eruptions and lava flows
3. Move on to Mount Coochin to experience a former volcano

STAGE 3: COOLING DOWN
1. Take a look at the rhyolite rocks and understand the process of cooling magma
2. Admire the “The Organ Pipes” (cooling columns) at Mount Beerwah
3. Compare the cooled trachyte magma of Beerwah with the rhyolite from Coochin
Expedition 2: ‘Rocks and erosion’

Theme: The shaping of the Glass House Mountains

STAGE 1: MINERALS
1. Identify the main minerals of the volcanic rocks at the base of Mount Beerwah
2. Taste the famous volcanic spring water of Beerwah and find out why it's so pure and rich of natural minerals
3. Make a stop at Mount Ngungun and visit the old quarry at its eastern side

STAGE 2: ROCKS
1. Visit Mount Coonowrin, or Crookneck, to see the most notable and dramatic of the volcanic plugs
2. Be informed about the process of igneous rocks being changed into layers of sediment by weathering and erosion
3. Realize the geological hazards related to general slope stability and individual block stability at Coonowrin

STAGE 3: EROSION
1. At the Glass House Mountains Lookout, learn about the difference in erosion of soft and hard rocks
2. Have a clear view on the mountains and see the result of differences in erosion on the landscape
3. Enjoy the view and try to recognize every Glass House Mountain by its unique shape
Expedition 3: ‘Plants and wildlife’

Theme: The biodiversity of the Glass House Mountains

STAGE 1: BIRDS
1. Start at Mount Miketeebumulgai and learn how to identify local bird species
2. Be introduced to the threatened birds of the Glass House Mountains and be aware of the causes
3. Spot present bird species like the black cockatoo and the grey goshawk

STAGE 2: FOREST
1. Move to and walk through the rainforest of Mount Beerburrum
2. Observe three of the world’s most endangered plant species
3. Visit the rainforest of Mount Tibberoowuccum and understand its structural complexity

STAGE 3: CONSERVATION
1. Meet the endangered animals of the region in Australia Zoo
2. Find out about the endangered species and breeding programs
3. Have your own private zoo keeper experience

Mount Miketeebumulgai
Mount Tibberoowuccum
Mount Beerburrum
Australia Zoo

29.6 km
**Expedition 4: ‘Traditional owners’**

**Theme:** The first settlers of the Glass House Mountains

**STAGE 1: Legend**
1. Go to the base of Mount Tibrogargan, father of the Glass House Mountains
2. Listen to the Dreamtime legend of the Glass House Mountains
3. Try to understand why tourists are asked by Traditional owners not to climb the mountains

**Landsborough Historical Museum**
- Be informed about the daily life of the traditional owners
- In the Landsborough Historical Museum, learn about the first contacts with European settlers

**STAGE 2: SACRED PLACES**
1. Gather at the Aboriginal Bora ring off Johnston Road and find out how it was made by women and why
2. Get familiar with an Aboriginal initiation ceremony
3. See the remains of a kippa ring used by males for educational and ceremonial purposes

**Aboriginal Bora Ring**
- STAGE 2: SACRED PLACES
- STAGE 3: DAILY LIFE

**STAGE 3: DAILY LIFE**
1. Check the grooves that were formed in the process of making axes at Little Rocky Creek
2. Be informed about the daily life of the traditional owners
3. In the Landsborough Historical Museum, learn about the first contacts with European settlers

**Little Rocky Creek**
- 19.9 km

**Mount Tibrogargan**
Expedition 5: ‘European settlement’

Theme: The pioneers of the Glass House Mountains

**STAGE 1: Logging**
1. In the Landsborough Historical Museum, see how pioneers started to fell areas of timber for farming and stock
2. Learn about the early timber-processing practices in Queensland
3. Check out the old farming and timber getting equipment

**STAGE 2: TRANSPORT**
1. Have a tea or coffee with damper and syrup at the Australian Teamsters Hall of Fame
2. Follow the presentation about Cobb & Co and the story of the teamsters
3. View the different modes of transport that were used by European settlers

**STAGE 3: DAILY LIFE**
1. Visit buildings from a bygone period in the Caboolture Historical Village
2. See demonstrations of historical skills such as the village blacksmith, wood crafting and others
3. Board the train and be inspired by tales and anecdotes from the age of pioneers
Expedition 6: ‘Modern values’

Theme: The significance of the Glass House Mountains

STAGE 1: INSPIRATION
1. Start at the Woodford water tower and experience why the region is such an inspiration for many artists
2. Follow a landscape painting lesson
3. Create your own painting of the Glass House Mountains area

STAGE 2: CULTIVATION
1. Bike along rich farm lands that produce strawberries, bananas, pineapples, and pawpaw
2. See it as benefits of the rich volcanic soil and buy something at the roadside stalls and shops

STAGE 3: MOTIVATION
1. Move on to the lower slopes of Mount Elimbah
2. Imagine how WW II soldiers were trained and motivated on these slopes
3. Find out about the soldier settlements that were set up to help and motivate returned WW I soldiers

Mount Elimbah
Woodford water tower
Mount Tunbubudla
21.9 km
Expedition 7: ‘Sustainable future’

➢ Theme: The future of the Glass House Mountains

STAGE 1: SEA LEVEL RISE
1. Kayak or paddle the Coochin Kreek and enjoy this beautiful but vulnerable estuary
2. Be informed about the expected rise in sea level in these coastal areas
3. Try to understand the impact of the rise on this vulnerable environment and its inhabitants

STAGE 2: CLIMATE CHANGE
1. In the Beerwah library, be informed about the process of climate change
2. Learn about the effects of longer and hotter summers on agriculture, biodiversity, and human health
3. Understand the impact of more frequent natural disasters (cyclones) on the regional economy and environment

STAGE 3: ADAPTATION AND TRANSITION
1. Find out how Queensland plans to transition to a zero carbon economy
2. Get to know Queensland’s adaptation strategy and what is being done to address the risks of climate impacts
3. Move on to Wild Horse Mountain for a final view on the mountains before ending your geopark experience
Summary

Wild Horse Geopark:

• a complete story of the Glass House Mountains area
  • told in 7 expeditions (and 21 stages)
    • based on outstanding landscapes and geology
    • incorporating biodiversity
    • incorporating cultural characteristics
      • indigenous
      • (post) European settlement
  • completely explorable by bike
  • max. 2 hours distance each

• a good example of how to design an Australian geopark
  • by connecting with Aboriginal culture
  • based on existing facilities