

Integrating Cultural Knowledge and Astronomy Outreach

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DarkSky
INTERNATIONAL

NOCTURA

How do we make astronomy
relevant and compelling in
diverse African contexts?

The Challenge

Standard astronomy outreach often looks like this

- Telescope-first
- Technical terminology
- Western scientific framework

The result:

- Little cultural relevance - abstract and disconnected
- One way flow of knowledge and information, low comprehension
- One-size-fits-all approach across diverse communities

How do we bridge the gap from astronomy to where communities are?

*Different communities value
different things - effective outreach
can meet them where they are*

Cultural heritage & identity

For communities with rich oral traditions, indigenous knowledge systems

Connect astronomy to who they are

- Existing sky stories and navigation practices are already a part of their culture
- Seasonal calendars and agricultural timing are encoded into the night sky
- Night sky knowledge is a source of pride and identity

The approach: Validate, then expand

Example

The Moon as a calendar in Maasai culture

Live on/close to the Equator, our
'seasons' are rainy/dry

Day length is roughly 12 hours all year, no
solstices/equinoxes as markers of time in
the year

"When the bend of the crescent moon
points North, it will rain"



Example

The Moon as a calendar in Maasai culture



Example

The Moon as a calendar in Maasai culture

Created a bridge to start talking about the Moon from a scientific point of view

Validated cultural knowledge - meaningful exchange that builds trust

The astronomy knowledge now has an anchor in something relevant



Example

The Pleiades - Selemela - the ploughing stars

Traditionally used to calculate the start of the planting season



Example

The Pleiades - Selemela - the ploughing stars

Can use this as a jumping off point for many things:

- star clusters
- celestial cycles and timekeeping
- stars in general

Common reference point for both sides



Why this is important

- Validates and honours what communities already know
- Creates pride and ownership - rather than receiving "expert" knowledge from outsiders, there is mutual expertise being shared
- Shows astronomy isn't foreign - it's already theirs
- Preserving knowledge
- Cultural preservation becomes astronomy education

Create dialogue with communities

Integrate science with what's
important to them

Thank you