CONNECTIONS TO AFRICA

TEACHER & CHAPERONE GUIDE

GRADES 4-6

AFRICAN ELEPHANT CROSSING

CLEVELAND METROPARKS ZOO

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3900 Wildlife Way, Cleveland, Ohio 44109 ♦ (216) 661-6500

Getting Started

- Use the tools inside this kit to explore and navigate African Elephant Crossing and experience *Connections to Africa*.
- Some notes and examples provided within this guide are designed for the use of the adults leading the group. Please allow students to develop their own ideas and hypotheses.
- The "Survival Need - Water" lesson is designed to follow the "Designing Green Solutions" lesson found within our *Connections to Africa* Inquiry Kit, but can still be completed without prior classroom preparation.
- **OTHERS WILL USE THIS GUIDE, PLEASE DO NOT WRITE IN IT.**

HAVE FUN!

Survival Need - Water

- Look inside the Sydell L. Miller Elephant Care & Visitor Center for three containers that could potentially be used to hold water. All of these containers are used in Africa to help transport water.
- **FEEL FREE TO EXAMINE AND MANIPULATE CONTAINERS. PLEASE DO NOT OPEN ANY OF THE CONTAINERS.**
- What obstacles do you think, or have you already identified that would make it hard for children in Africa to transport water to their homes? (Not all people in the world have running water available to them in their homes.)
- Use the photographs located on the next page as examples of obstacles that children may face in Africa.
- Which container do you think would be best to use for transporting water over long distances?
    - ✓ Your group can be as creative as you like. How could you measure or test which container would work better?
- How do these containers compare to the solutions your class discussed back at school?
- Record your answers on the **Water Transportation Data** sheet on the provided clipboard.

Survival Need - Water

Animal Behavior

- Scientists regularly observe animals and record their behavior to see how they are spending their time.
- What do you think the elephants will spend the most time doing?
    - ✓ Make a **hypothesis**. There are no wrong guesses.
- Now help to find out the answer…
- Find the elephants in the exhibit and go stand where you can easily observe as many of them as possible.
    - ✓ Willy – largest elephant, missing right tusk.
    - ✓ Shenga – tallest female, question mark-shaped tail, tear at tip of trunk.
    - ✓ Kallie – head hangs low on shoulders, missing finger-like projections on tip of trunk, large head.
    - ✓ Martika – most hair on top of head, even length tusks.
    - ✓ Moshi – shortest elephant, no hair at end of tail, one tusk much longer than the other.
- Use the **African Elephant Ethogram** in this guide to aid in recording your observed behaviors.

- For 10 minutes, watch each elephant and record their behaviors. Time and observed behavior should be recorded **EACH MINUTE ON THE MINUTE.**
- Scientists do these types of observations over **LONG** periods of time. Continue taking observations for another 10 minutes. If you feel as though your group needs a break, move on to the Get-Close Encounter and return after to complete the final 10 minutes of observations.
- Use the **Data Sheet** on the provided clipboard inside of your Inquiry Backpack to record the observations you see.

Get-Close Encounter

- Elephants share their habitat with humans and many other types of animals.
- Find the Zoo volunteer holding an African animal. They may be outside in the Kgotla or inside the Sydell L. Miller Elephant Care & Visitor Center.
- Go over to meet this volunteer and their animal. They will speak with your group about the animal.
- If your group has not already completed 20 minutes of observations, **REMEMBER** to go back and complete the final 10 minutes.

Reporting Your Data

- An important part of being a scientist at the Zoo is to be sure to add **YOUR** findings to the findings of other scientists.
- Use the iPad inside the inquiry backpack to enter your observations from the **Animal Behavior Data Sheet.**
- Enter your data by following the prompts in the "Reporting Your Data" section of the app.
  - ✓ Your findings will be added to our Master Database, a place that we store **ALL** of the *Connections to Africa* data collected by scientists just like you!
- Was your original hypothesis proven or disproven? Can you think of any reasons why your hypothesis might have been disproven?
- Take your **Animal Behavior Data** sheet back to school. Visit www.clemetzoo.com to find the **Collected Elephant Observation Data – Grades 5 and 7** spreadsheet.
- How do your observations compare to the data that has already been collected by other groups? What factors might contribute to different groups seeing other elephant behaviors?

African Elephant Ethogram

Behavior	Abbreviation	Description
Crossing Legs	CL	Elephant is resting with its legs crossed
Standing	STA	Elephant is in upright position, not moving
Walking	WA	Elephant is moving at a steady pace
Running	RU	Elephant is moving at a quick pace
Eating	EA	Elephant is using trunk to place food in mouth
Drinking	DR	Elephant is using trunk to place water in mouth
Defecating	DE	Elephant is standing, expelling feces
Urinating	UR	Elephant is standing, expelling urine
Swinging Trunk	ST	Elephant is swinging its trunk left and right
Trunk Searching	TS	Elephant is using its trunk to search for objects
Trunk Holding	TH	Elephant is holding an object with its trunk
Flapping Ears	FE	Elephant's ears are moving back and forth
Throwing Mud	TM	Elephant is throwing dirt or mud on its body
Bathing	BA	Elephant is in the water or spraying itself with water
Rubbing Rocks	RR	Elephant is rubbing its side against large rocks
Touching Trunks	TT	Elephant is using trunk to touch another elephant
Sleeping	SL	Elephant appears to be asleep, eyes closed
Laying Down	LD	Elephant is laying down on its side
Bobbing	BO	Elephant is bobbing its head up and down
Swaying	SW	Elephant is swaying its head or body left and right
Trumpeting	TR	Elephant is making a loud noise with its trunk
Out Of View	OV	Elephant is not visible to make an observation
Other Behavior	Other	Any other behavior not listed

Water Transportation Data

Survival Need - Water**:**

What obstacles do you think, or have you already identified that would make it harder for children in Africa to transport water back to their homes?

_____

_____

_____

How could you measure or test which container would work better?

_____

_____

_____

How do these containers compare to the solutions your class came up with in the classroom?

_____

_____

_____

Animal Behavior Data

Are you observing indoors or outdoors?_____ Date _____

Weather Conditions _____

Start Time _____ End Time _____

Other Conditions _____

Time	Willy	Shenga	Kallie	Martika	Moshi
0					
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

Start Time _____ End Time _____

Time	Willy	Shenga	Kallie	Martika	Moshi
0					
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

Return Your Backpack

- Now that you have completed your exploration of African Elephant Crossing, hopefully you and your group feel a *Connection to Africa*.
- Please remember to **RETURN THE ENTIRE BACKPACK AND ALL OF ITS CONTENTS** to the lock box where you picked it up.

AFRICAN

ELEPHANT CROSSING

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