## Shika Express - Biology Version 1.0 TZ

# HANDS-ON ACTIVITIES COMPANION GUIDE TANZANIA

TEACHER'S GUIDE March 10, 2014

# Contents

I	Hands-On Activities	2
1	Biology Activities for Form I	3
2	Biology Activities for Form II	4
3	Biology Activities for Form III	5
4	Biology Activities for Form IV	6
II	Student Practical Worksheets	7
A	Local Materials List	8
В	Shika Express Demonstrations for Biology	9

# Part I Hands-On Activities

# Biology Activities for Form I

# Biology Activities for Form II

# Biology Activities for Form III

# Biology Activities for Form IV

# Part II Student Practical Worksheets

#### **Appendix** A

#### Local Materials List

In order to gain a thorough understanding of science, students must be able to make a connection between classroom learning and the outside world. The application of scientific concepts to daily life is a critical component of a student's science education. The following is a list of locally available materials which may be used to substitute conventional materials and apparatus for various activities. These materials have the following advantages:

- They are readily available in the village or a nearby town;
- They are cheaper than conventional materials;
- They may safely substitute the conventional materials without fear of losing accuracy or understanding;
- They help students to draw a connection between science education and the world around them.

Imagination and innovativeness is encouraged on the part of the student and teacher to find other suitable local substitutions.

Throughout this book you will see materials that have been marked with an asterisk (\*). These are locally available materials which can be made or purchased for your laboratory or classroom. The guide for using and making these local materials is found in this section.

### AppendixB

# Shika Express Demonstrations for Biology