

## Lesson Overview

This overview contains the background information about this lesson, along with the **associated curriculum connections**, skills learned and materials required for students to complete the lesson.

- Grade Range:**
- 7 – 12
- Topics and Themes:**
- Population Density
  - Water and Global Development
  - Quality of Life
- Geographic Scope:**
- Africa
- GIS Skills:**
- Searching for Layers
  - Creating and Symbolizing Features
  - Adding Information to Features.
- Materials Required:**
- An ArcGIS Online organization account. If you or your students do not have an account, you can request accounts here: [www.esri.ca/agolaccess](http://www.esri.ca/agolaccess). Please allow up to two business days for accounts to be created. For more information on ArcGIS Online, visit: [www.arcgis.com](http://www.arcgis.com).
  - An electronic version of this lesson is available at: <http://bit.ly/2sunrv>.

## Lesson Contents and Time Required

GIS lessons are assembled for teachers as a collection of resources that are needed to facilitate learning a specific topic or issue using mapping and spatial data. This lesson contains the following resources:

- **Lesson Plan**  
A teacher's resource that outlines the suggested workflow for using the contents of a lesson. This workflow is the same across all of Esri Canada Education's lessons. To download a copy, visit: <http://bit.ly/2nsYODg>
- **Presentation (10 – 15 minutes)**  
A Story Map presentation in ArcGIS Online for the teacher to introduce the GIS skills that will be studied. To view the Story Map, visit: <http://arcgis.is/2a2CfVt>
- **Tutorial(s) (60 – 75 minutes)**  
Hands-on documents referenced in this overview including step-by-step instructions for learning GIS skills.
  1. Introduction to ArcGIS Online 60 – 75 minutes <http://bit.ly/2mtQRQm>
- **Assignment (30 minutes)**  
A student activity intended to be the final part of a lesson. Students can complete the tasks by applying the GIS skills learned through tutorials that are relevant to the lesson outcomes.
- **Data**  
The data required for this assignment can be found in ArcGIS Online. There is one dataset "Earth at Night" published by dkenso. Students should search for this layer when adding a layer to their basemap.

**Note:** For a complete learning experience, it is highly recommended that students complete the tutorials associated with this lesson. However, if the tutorials have already been taught, students can use them as a point of reference to complete the assignment.



# Exploring Africa

## Learning Outcomes

By completing this lesson, students will gain the following curriculum-focused knowledge:

- 1. Understanding the interrelationships between population distribution, population density, and quality of life.**  
(**Ontario** – Grade 12 Geography; **British Columbia** – Grade 11 Social Studies; **Alberta** – Grade 9 Social Studies; **Manitoba** – Grade 7 Social Studies, Grade 12 Social Studies; **New Brunswick** – Grade 12 Geography; **Nova Scotia** – Grade 8 Social Studies, Grade 12 Geography; **Prince Edward Island** – Grade 9 Social Studies, Grade 12 Social Studies; **Newfoundland & Labrador** – Grade 10 Geography, Grade 12 Geography; **Saskatchewan** – Grade 7 Social Studies; **Northwest Territories** – Grade 9 Social Studies; **Yukon**– Grade 11 Social Studies)

## Background Sources Used

Using the following sources of information, students will learn about Africa. Students are not limited to using these sources of information to complete the Exploring Africa assignment. They are welcome to use other sources of information that would be applicable to completing this assignment.

Review the following Web links for background information on Africa. All links were last accessed

- Africa's Physical Geography, National Geographic  
<https://www.nationalgeographic.org/encyclopedia/africa-physical-geography/>
- Why I love Africa's Largest City, National Geographic  
[https://www.youtube.com/watch?v=ApCZMHMXi\\_E](https://www.youtube.com/watch?v=ApCZMHMXi_E)
- Lagos, Nigeria, National Geographic  
<http://ngm.nationalgeographic.com/2015/01/lagos/draper-text>

© 2017 Esri Canada. All rights reserved. Trademarks provided under license from Environmental Systems Research Institute Inc. Other product and company names mentioned herein may be trademarks or registered trademarks of their respective owners. Errors and omissions excepted. This work is licensed under a [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-nc-sa/4.0/). The Education and Research Group at Esri Canada makes every effort to present accurate and reliable information. The Web sites and URLs used in this tutorial are from sources that were current at the time of production but are subject to change without notice to Esri Canada.

