



[www.Journey2050.com](http://www.Journey2050.com)

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# PRESENTER OVERVIEW

- **Lisa Gaskalla** - National Agriculture in the Classroom Executive Director
- **Debra Spielmaker** - National Center for Agricultural Literacy, Team Leader
- **Lindsey Verhaeghe** – Agrium, Sustainability and Stakeholder Relations



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**YOU DON'T GET SUPPER.  
SHE THOUGHT  
I WAS YOU AND  
FED ME TWICE**



# HOW WILL WE SUSTAINABLY FEED 9 BILLION PEOPLE BY THE YEAR 2050?



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# JOURNEY 2050



- **FREE** education program on world food sustainability
- Developed with teachers and industry experts to **complement grade 7-12 curriculum.**
- Complete in **6 hours.** Everything provided!
- Students experience the lives of **farm families in different countries**
- As students **play the games** they make decisions and see the impact on **society**, the **environment** and the **economy** at a **local and global scale.**



# PRESENTATION OUTLINE



**Core topics** include: sustainable agriculture, best management practices, soil health & nutrients, water conservation, economic influence, geography and agricultural careers.



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# WHY 2050?



Over **7 billion** people  
today



Est **9 billion** people  
by the year 2050

It is predicted we will need to grow **60-70% more food** than we currently are today, on the same amount or less land.

There will be even more pressure on agricultural yields (how much food a crop produces) due to things like weather, pests, consumer demands.



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# FOOD SECURITY RISK



Of all the food  
produced, **1/3 of our  
total food  
supply is  
wasted**

- Approx. 1.4 billion people live in poverty and around 870 million people are hungry, malnourished and food insecure (have difficulty acquiring food).
- **Developed** countries food is thrown out and overconsumed
- **Developing** countries food is lost to unreliable storage and transportation.



**Hunger is often caused by food waste and inequality of distribution, not scarcity.**



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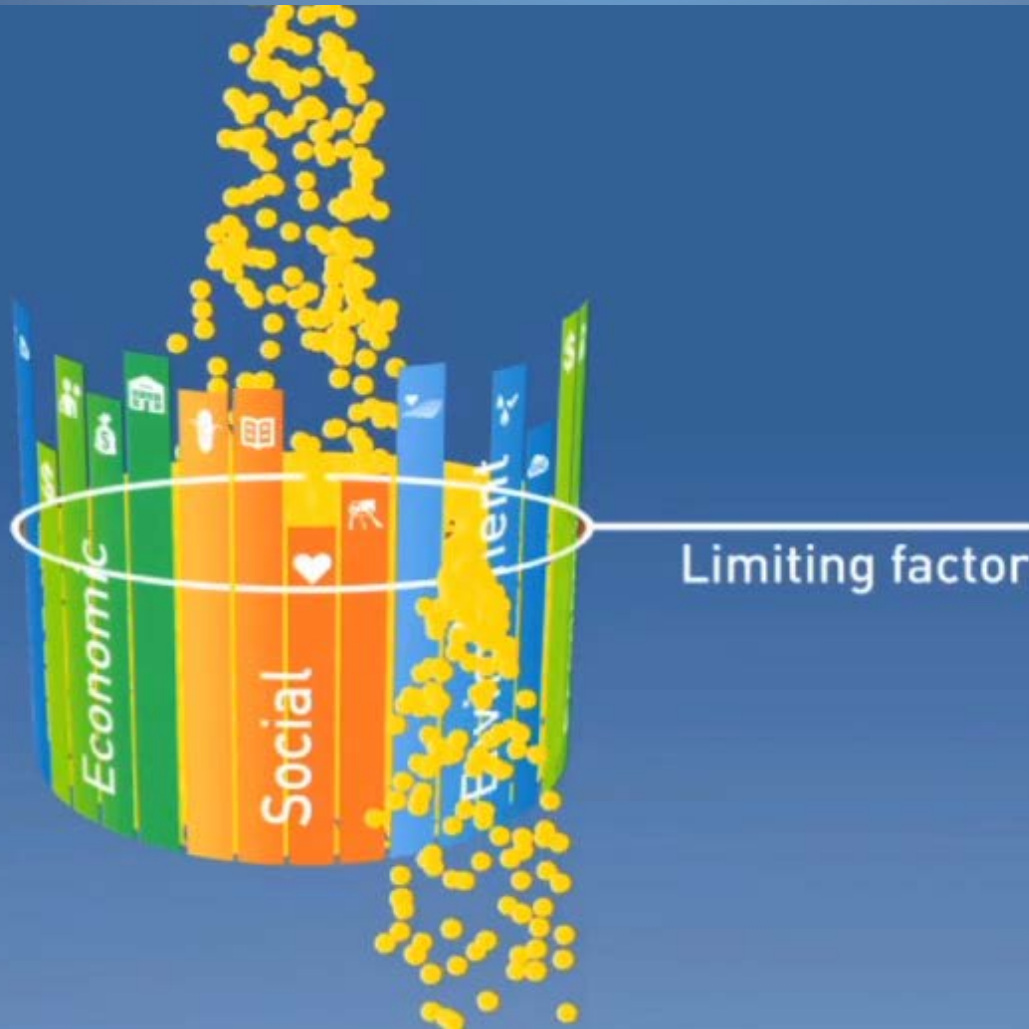
# INTRODUCTORY VIDEO



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# LIMITING FACTOR



A community is only as successful as the least developed factor.

We must continually try to improve the weakest one.



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**ECONOMIC FACTORS:**  
profits, jobs,  
incomes, community

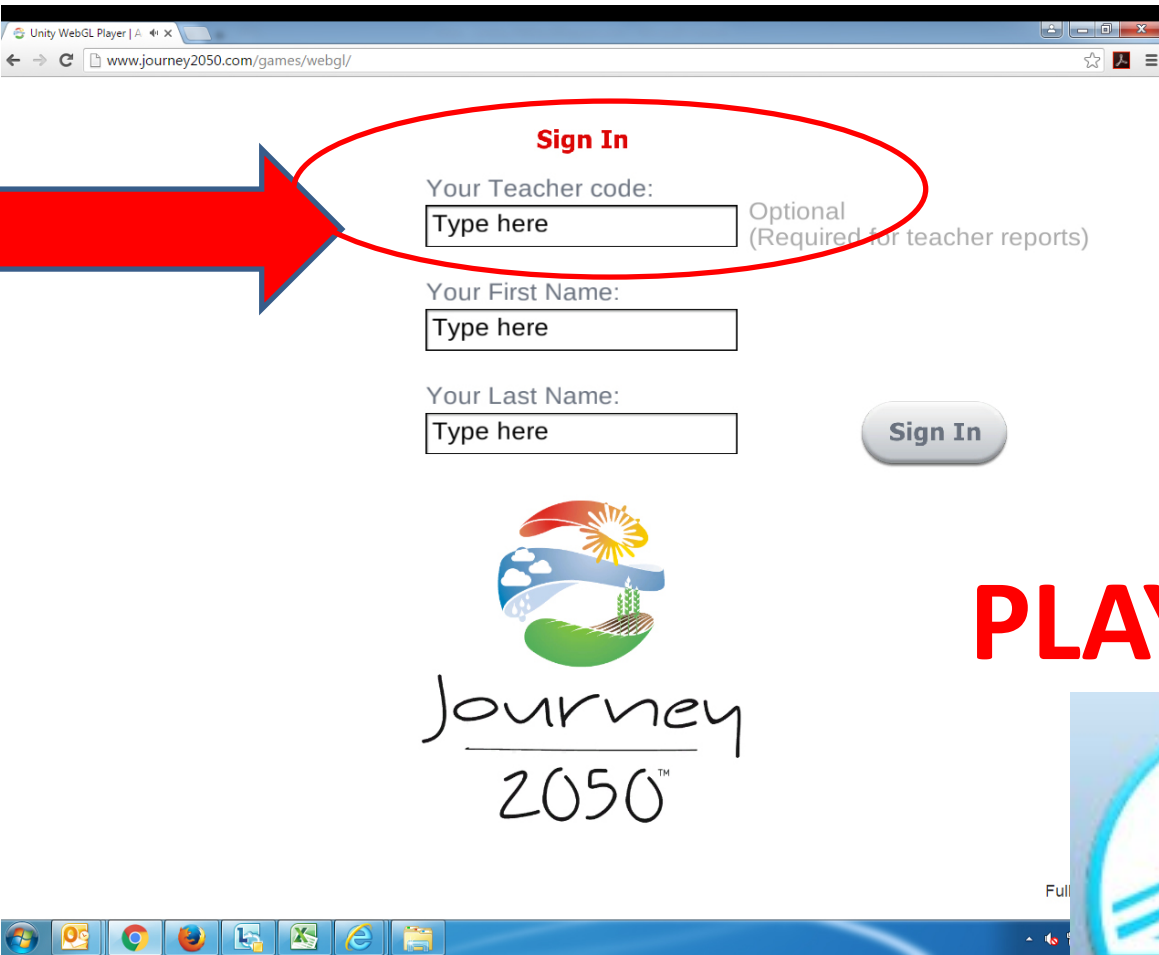
**SOCIAL FACTORS:**  
food, education,  
health, infrastructure

**ENVIRONMENTAL FACTORS:**  
soil health, habitats,  
water, green house gases



# PASSWORD: DOUG

## TEACHER CODE: 0001



Unity WebGL Player | X

www.journey2050.com/games/webgl/


**Sign In**

Your Teacher code:  
 Type here Optional  
(Required for teacher reports)

Your First Name:  
 Type here

Your Last Name:  
 Type here

**Sign In**

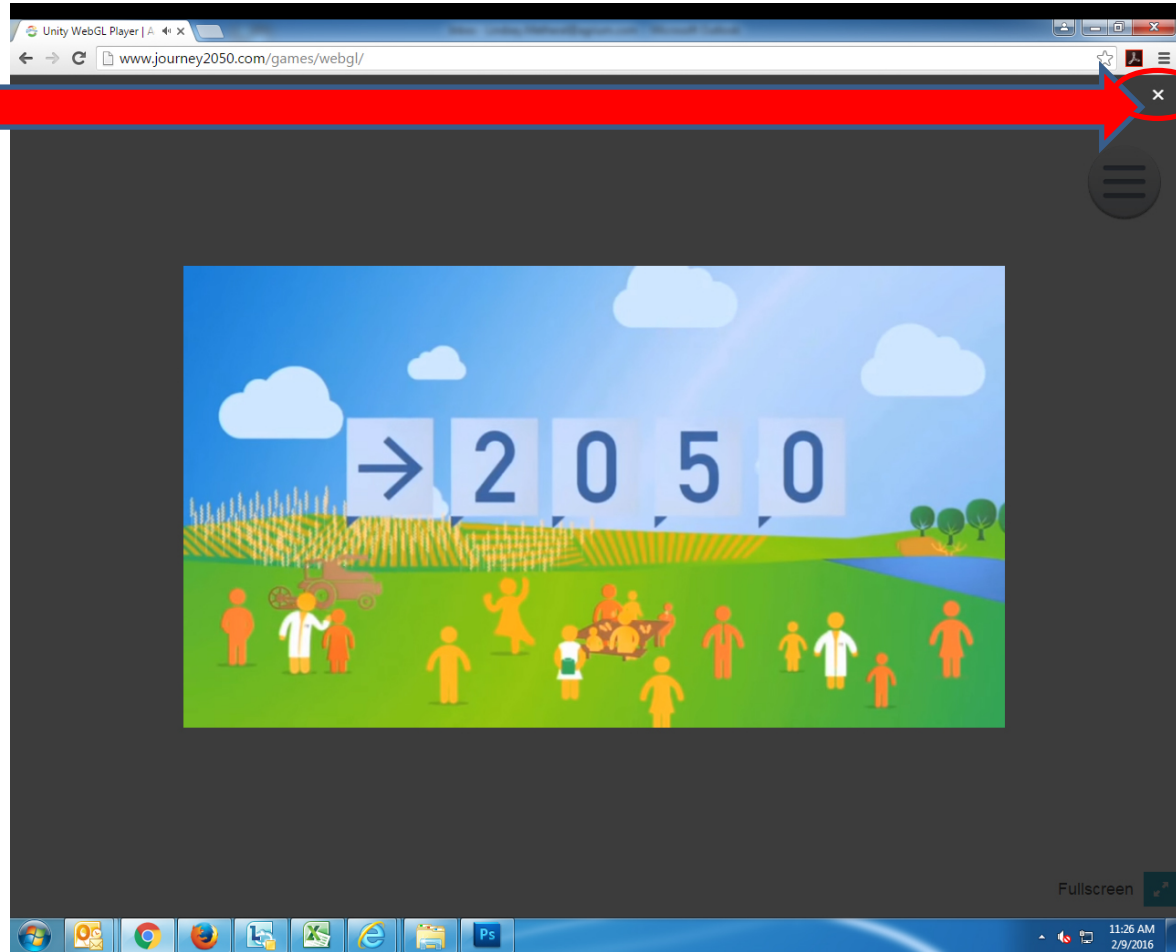
  
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**0001**  
(Letter O, number  
zero, number  
zero, number 1)

## PLAY LEVEL 1



# EXIT VIDEO IF IT POPS UP



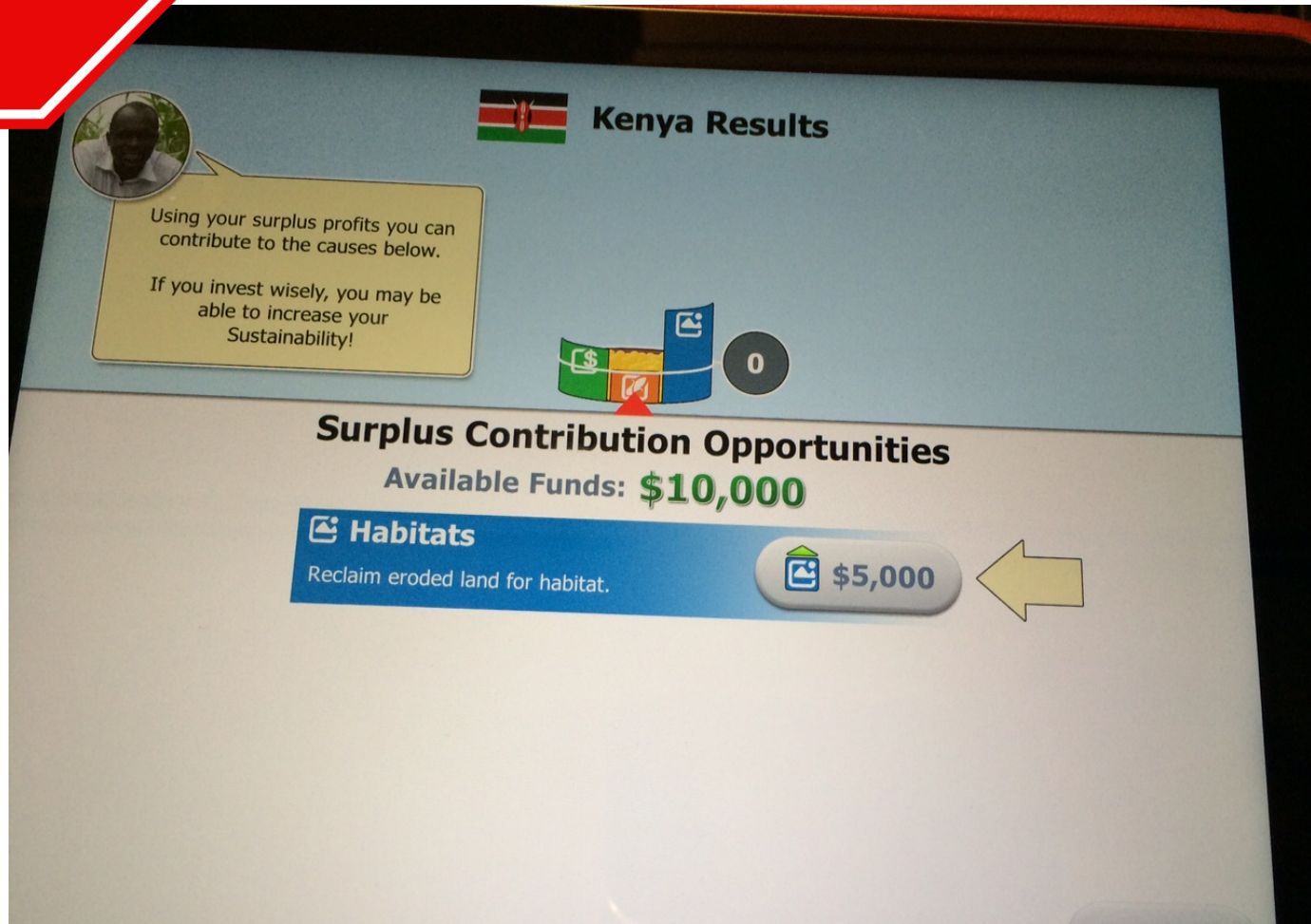
**SMALL WHITE 'X'**  
**NOT THE TOP RED 'X'**



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**STOP**

**WHEN YOU GET  
TO THIS SCREEN**







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# Plant Health

## LESSON 2



***How are nutrients  
depleted  
from the soil?***



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- Could farmers add **too many** nutrients to their fields?

Yes

- Could farmers also **not add enough** nutrients?

Yes

- If growing plants deplete soil nutrients, why should farmers continue to grow crops?

To produce our food so we can eat!



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# EXAMPLE

## Watch the Journey 2050: Plant Health Video



### **As you watch, discover:**

- What three primary nutrients are necessary for healthy plant growth, and how can they be replenished?
- How does a plant resist disease and pests?
- What are best management practices?
- What are the 4Rs?



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# EXAMPLE















# LEVEL 2: NUTRIENTS

Kenya \$13,950

TIME REMAINING

## Select Nutrients

No Nutrients	Standard Practice	Best Practice
		
Crop Yield: 	Crop Yield: 	Crop Yield: 
Soil Health: 	Soil Health: 	Soil Health: 
Cost: \$0	Cost: \$160	Cost: \$800
		

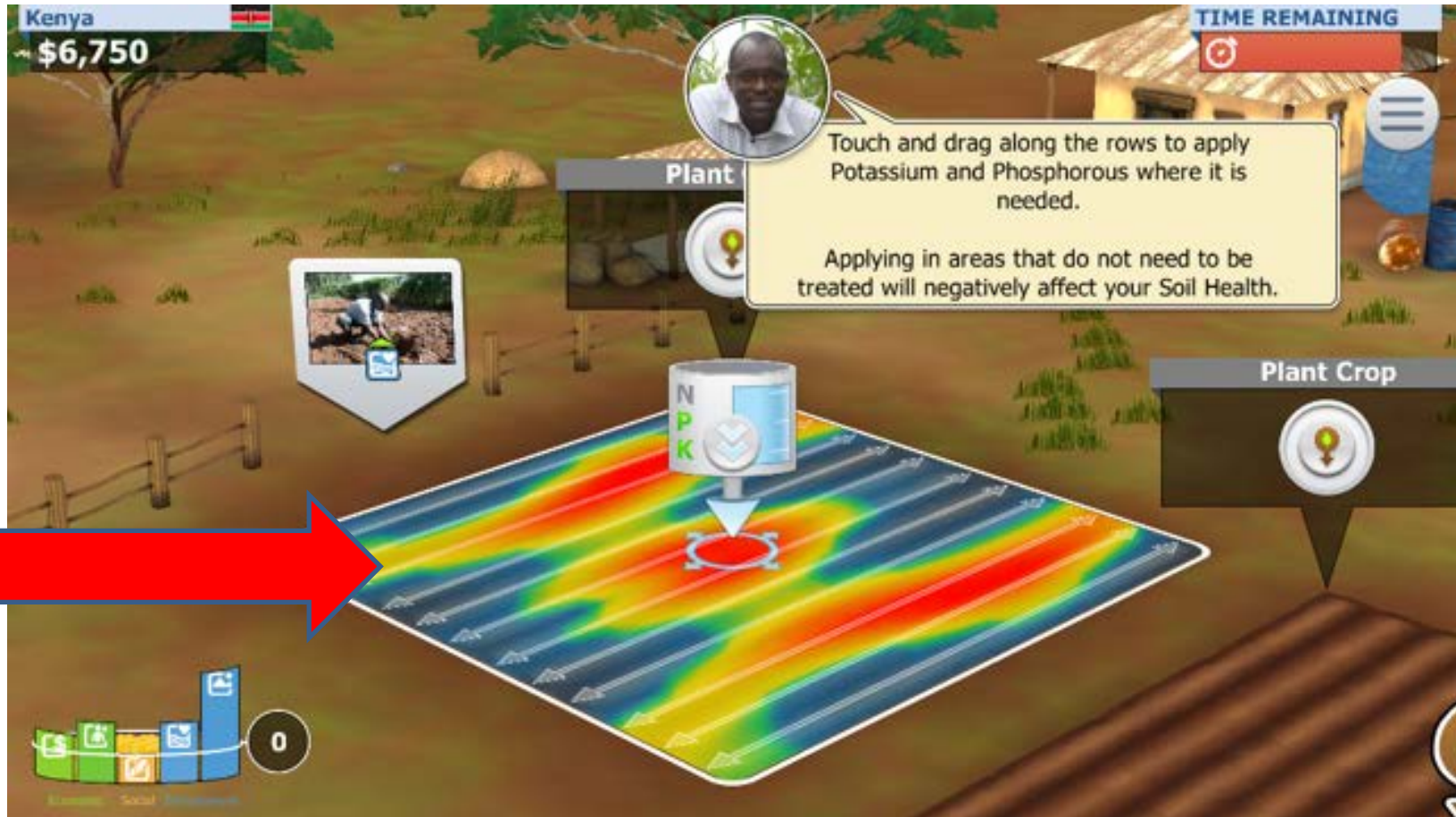
CLICK

21

Economic Social Environmental



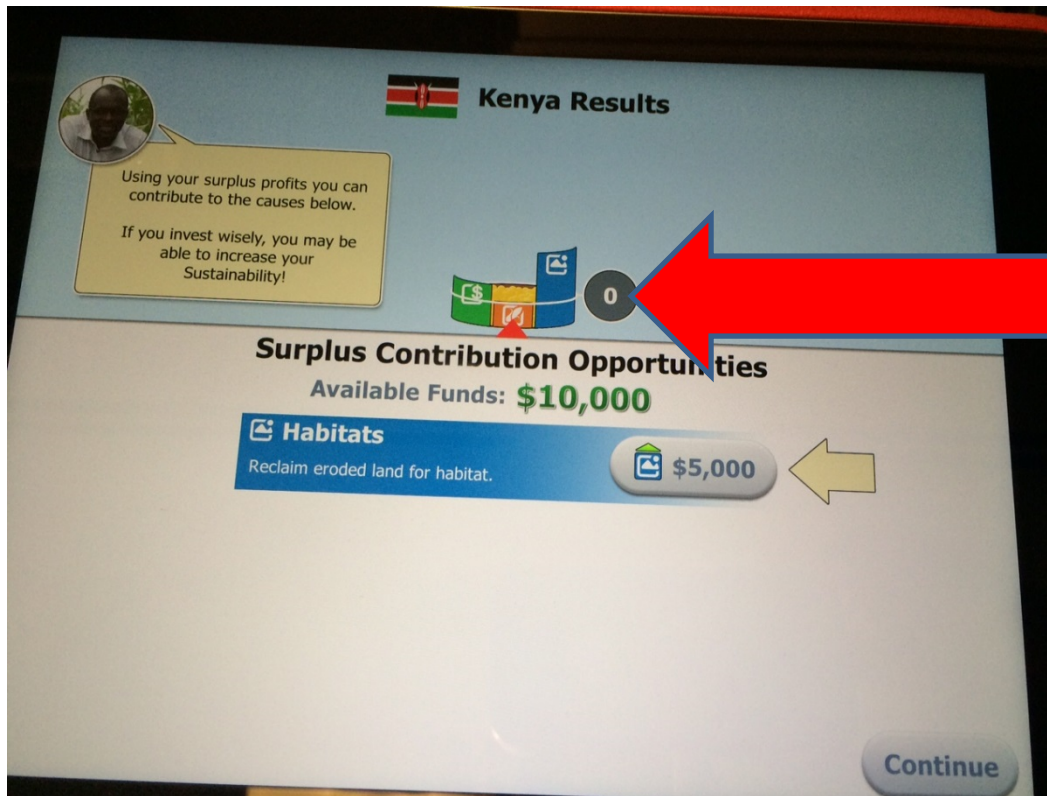
# SLIDE OVER RED/YELLOW AREAS





# GAME TIME!

# PLAY UNTIL WE SAY



## REMEMBER YOUR BARREL SCORE IN EACH COUNTRY





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**Careers for 2050 and Beyond!**

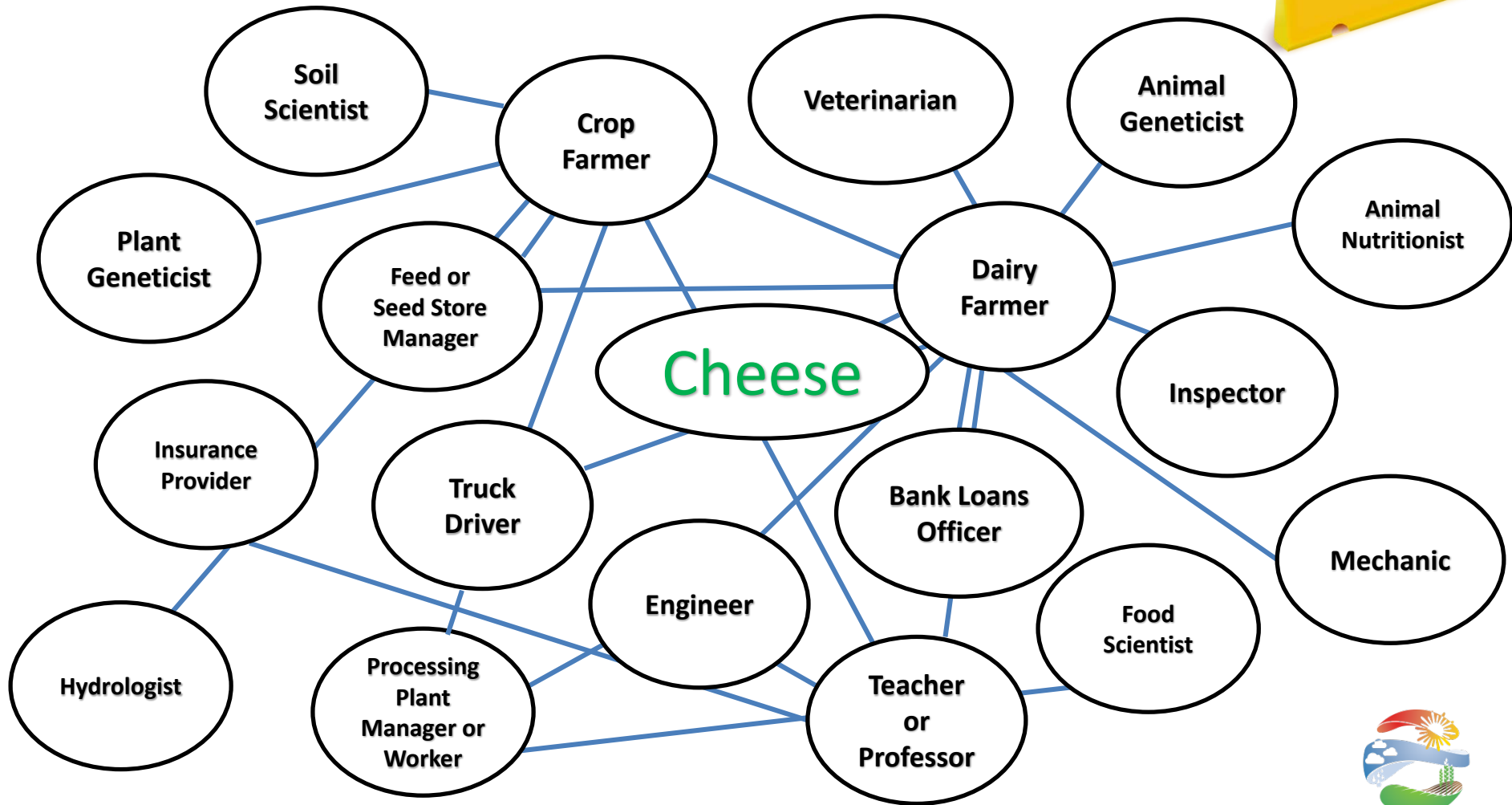
**LESSON 6**

## Grocery List

1. Ice Cream Cone
2. Eggs
3. Bread
4. Apples
5. Orange Juice
6. Tomatoes
7. Hamburger
8. Bacon
9. Peanuts
10. Potatoes



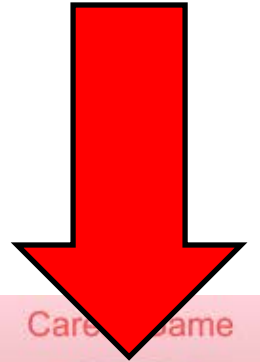
# HOW MANY JOBS DID IT TAKE TO PRODUCE YOUR FOOD?



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# Play Level 6



Level 1

Introduction



Level 2

Nutrients



Level 3

Water



Level 4

Economy



Level 5

Land Use



Level 6

Careers

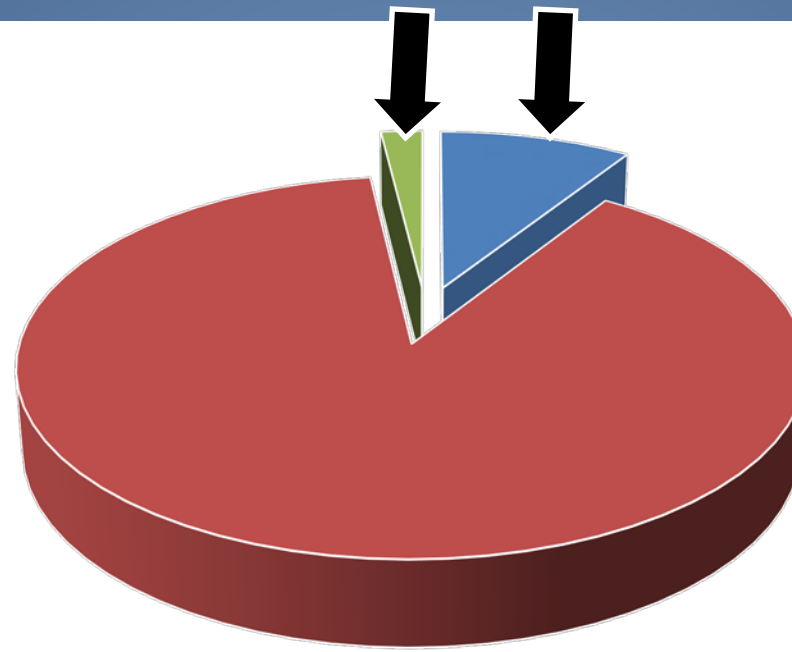


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**Farmers and ranchers represent 2% of the population in North America.**

**Jobs related to agriculture in America = 9.3% and Canada = 12.5%**



**Careers in agriculture spread from farm to fork and beyond.**

# LIKE WHAT YOU SEE? ACCESS FOR FREE!

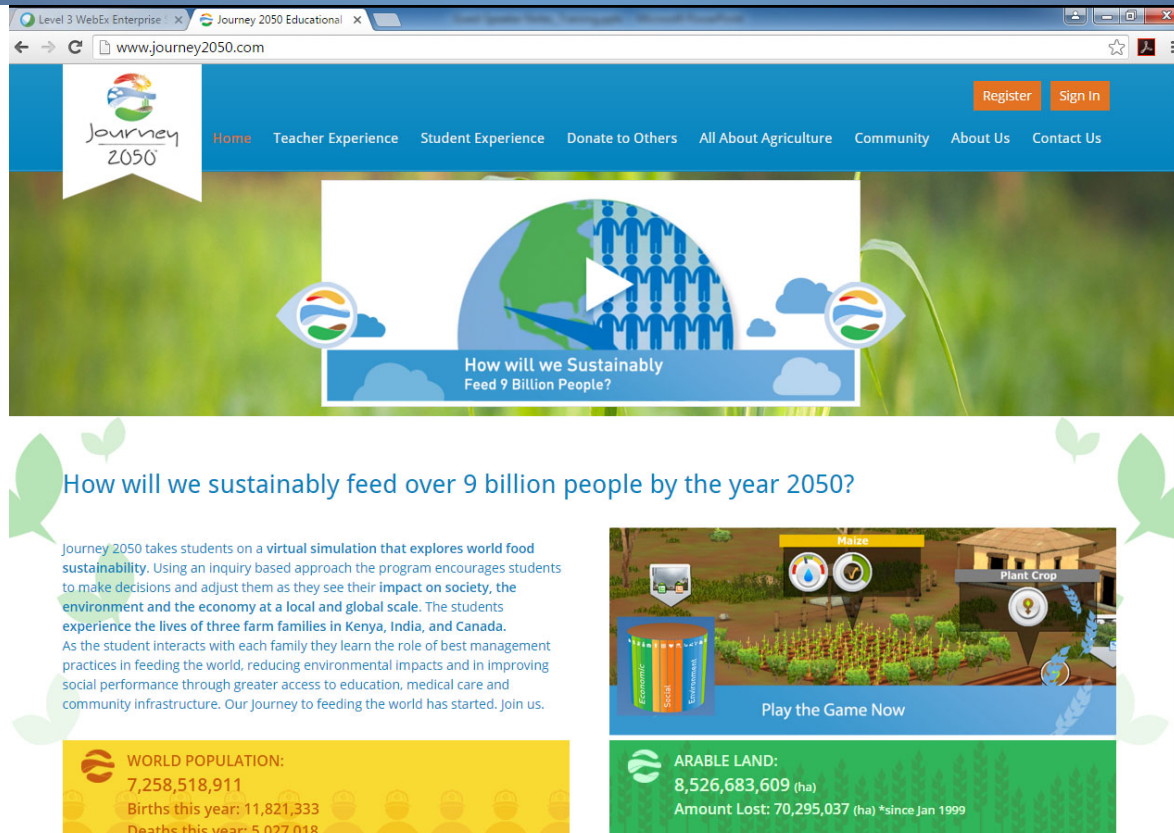
- **Online Experience**
  - Self directed, lesson plans provided
- **Guest Speaker**
  - 2 hours out of the 6 hour Online Experience
- **Download the School Version** in the respective store on [iPads, iPhones, Chromebooks](#) and [Tablets](#)



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# WWW.JOURNEY2050.COM



The screenshot shows the Journey 2050 Educational website. The browser window has tabs for 'Level 3 WebEx Enterprise' and 'Journey 2050 Educational'. The address bar shows 'www.journey2050.com'. The website has a blue header with the 'Journey 2050' logo and navigation links: Home, Teacher Experience, Student Experience, Donate to Others, All About Agriculture, Community, About Us, and Contact Us. There are 'Register' and 'Sign In' buttons. The main banner features a globe with a play button and the text 'How will we Sustainably Feed 9 Billion People?'. Below the banner, the text reads: 'How will we sustainably feed over 9 billion people by the year 2050?'. A paragraph describes the program: 'Journey 2050 takes students on a virtual simulation that explores world food sustainability. Using an inquiry based approach the program encourages students to make decisions and adjust them as they see their impact on society, the environment and the economy at a local and global scale. The students experience the lives of three farm families in Kenya, India, and Canada. As the student interacts with each family they learn the role of best management practices in feeding the world, reducing environmental impacts and in improving social performance through greater access to education, medical care and community infrastructure. Our Journey to feeding the world has started. Join us.' To the right is a game interface showing 'Maize' and 'Plant Crop' options, with a 'Play the Game Now' button. At the bottom, there are two statistics boxes: 'WORLD POPULATION: 7,258,518,911' (with sub-statistics for births and deaths) and 'ARABLE LAND: 8,526,683,609 (ha)' (with sub-statistics for amount lost since Jan 1999).

How will we sustainably feed over 9 billion people by the year 2050?

Journey 2050 takes students on a virtual simulation that explores world food sustainability. Using an inquiry based approach the program encourages students to make decisions and adjust them as they see their impact on society, the environment and the economy at a local and global scale. The students experience the lives of three farm families in Kenya, India, and Canada. As the student interacts with each family they learn the role of best management practices in feeding the world, reducing environmental impacts and in improving social performance through greater access to education, medical care and community infrastructure. Our Journey to feeding the world has started. Join us.

**WORLD POPULATION:**  
7,258,518,911  
Births this year: 11,821,333  
Deaths this year: 5,027,018

**ARABLE LAND:**  
8,526,683,609 (ha)  
Amount Lost: 70,295,037 (ha) \*since Jan 1999



Safari

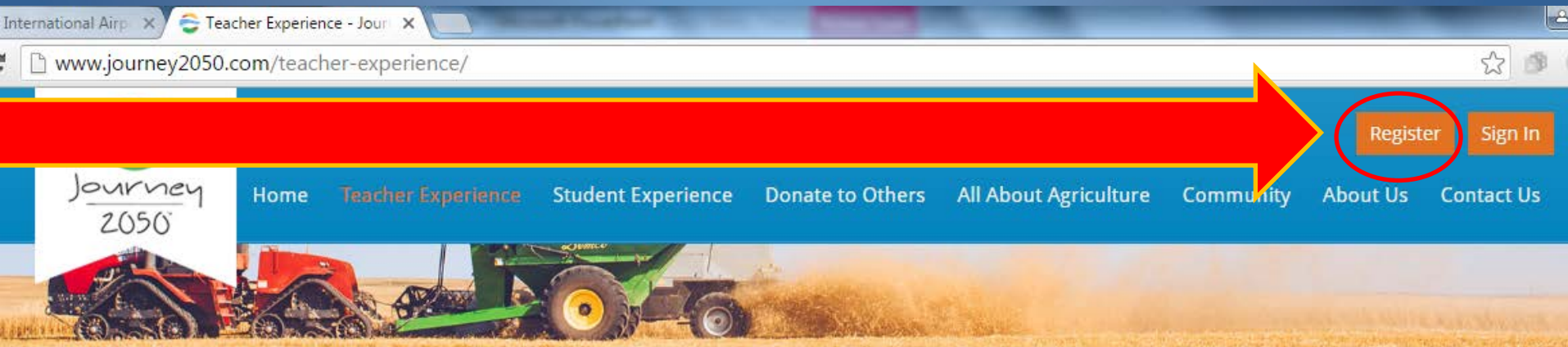


Firefox



Chrome (64 bit)

# REGISTER ONLINE



## Welcome Teachers

[Register](#)[Sign In](#)

Choose from one of our FREE experiences comprised of curriculum-based games, videos and activities. Register and sign in to learn more!

Journey 2050 was developed by teachers, industry experts and professional game developers. It takes **5 hours to complete the program**. Curriculum links occur between **grades 7-12**; however, due to the high context of the program older grades and even post-secondary educators are welcome to participate.

Using a virtual farming app, interactive activities and hands-on lessons the students will explore important concepts, such as but not limited to:

- The simple planting of a seed starts a **RIPPLE EFFECT** that helps farm families, communities, countries and the world.
- Agriculture is the foundation for life. **SUSTAINABLE AGRICULTURE** balances economic, social and environmental factors for long term success.
- To **FEED THE WORLD** in 2050, we will need to grow over 60% more food on the same amount of land

Register as a teacher and **SIGN IN** to learn more about each of our experiences. You will need to be signed in to see our experiences.

# FREE LESSON PLANS, POWERPOINTS, VIDEOS, GAMES & ACTIVITIES



Agrium Journey 2050

journey2050.rnp.io/teachers/online/activities\_and\_resources#step-by-step-guide

Online Experience Worldwide

Field Trip Experience Calgary Only

Guest Speaker

How it Works Begin Program Student Reports

Download the Game

Curriculum Connections


Step-by-Step Guide

Follow-up Activities

Get Involved

Feedback & \$\$ Credit

## Step-by-Step Guide



### Getting Started

- This program can be completed in less than 6 hours. Each level includes a teacher lesson plan, PowerPoint presentation, video and game.
- Read this document for instructions on how to begin: [View](#)
- Here is a Glossary of terms that are commonly used in the program: [View](#)

To download all of the files for this Program at once, click [Download](#)



### Introduction - Period 1 (90 minutes)

- Lesson Plan [Download](#)
- PPT Presentation [Download](#)
- Video (4 mins) [View](#) or [Download](#)
- Game Level 1 (3 mins) [Play](#)

### Enriching Activities:

- Handout 1: World Population [Download](#)

### Plant Health - Period 2 (45 minutes)

- Lesson Plan [Download](#)

**SPECIAL THANK YOU TO DEB, ANDREA, LISA AND TEAM FOR UPDATING THE LESSON PLANS IN 2017**



NATIONAL  
CENTER FOR  
AGRICULTURAL  
LITERACY



# 5E MODEL

- Engage,
- Explore,
- Explain,
- Elaborate, and
- Evaluate



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# MATRIX

National Agriculture in the Classroom

Home Teacher Center Student Center Get Involved Affiliates

## National Agricultural Literacy Curriculum Matrix

Matrix Home [Submit a Resource](#) [MyBinder](#) [Login to MyBinder](#)

### Search

#### Lesson Plans

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Grade Level

Content Area

Agricultural Literacy Outcomes

Common Core Connections

State Specific Content for

Submitted by a Specific State

Specific to the AITC Regions

Search Lesson Plans

### Lesson Plan(s)

**Journey 2050 Lesson 1: Introduction to Sustainable Agriculture (Grades 6-8)**  
Students will explore and understand the core question, "How will we sustainably feed 9 billion people by the year 2050?" and begin to think about the challenges and opportunities presented by this question. Students will explore factors such as expected population growth, food waste, and various positive and negative factors impacting sustainable agriculture.

**Journey 2050 Lesson 1: Introduction to Sustainable Agriculture (Grades 9-12)**  
Students will explore and understand the core question, "How will we sustainably feed 9 billion people by the year 2050?" and begin to think about the challenges and opportunities presented by this question. Students will explore factors such as expected population growth, food waste, and various positive and negative factors impacting sustainable agriculture.

**Journey 2050 Lesson 2: Plant Health (Grades 6-8)**  
Students will identify nitrogen, potassium and phosphorus as primary soil nutrients necessary in the production of abundant and healthy foods, describe various methods of replenishing soil nutrients that have been depleted by plant growth, discover how overall plant health impacts a plant's ability to resist disease and pests and describe what best management practices are in agriculture to improve overall sustainability.

**Journey 2050 Lesson 2: Plant Health (Grades 9-12)**  
Students will identify nitrogen, potassium and phosphorus as primary soil nutrients necessary in the production of abundant and healthy foods, describe various methods of

# JOURNEY EXPANSION



**SCHOOL EDITION:  
JOURNEY 2050**

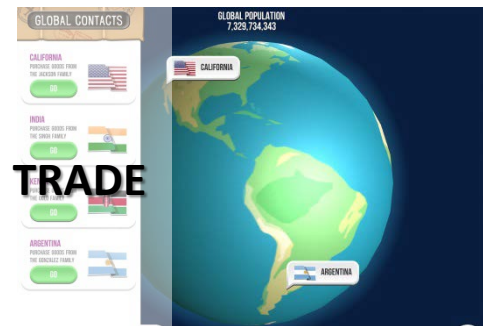
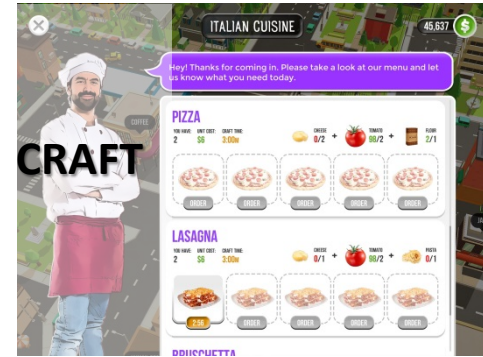


**HOME EDITION:  
FARMERS 2050**





# ONE FARM. NO TIMERS. MORE CROPS, ANIMALS & CRAFTING.



FREE. NO IN-APP PURCHASES. EVER.







**LET'S PLAY!**

**FARMERS 2050**





# BROUGHT TO YOU IN COLLABORATION



[www.calgarystampede.com](http://www.calgarystampede.com)



[www.albertacanola.com](http://www.albertacanola.com)



[www.growingthenextgeneration.com](http://www.growingthenextgeneration.com)



[www.aitc-canada.ca](http://www.aitc-canada.ca)



[www.agclassroom.org](http://www.agclassroom.org)



[www.agricultureforlife.ca](http://www.agricultureforlife.ca)



[www.nutrientsforlife.ca](http://www.nutrientsforlife.ca)  
[www.nutrientsforlife.org](http://www.nutrientsforlife.org)



[www.4-h-canada.ca](http://www.4-h-canada.ca)



# Questions?

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# OPTIONAL



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# CLASSROOM COMMENTS





# SNEAK PEAK

- Here are some samples of slides used in Level 5 Land Use.
- The goal is to:
  - Share **how much land on earth** we have to **grow crops**
  - Have students **compare arable land** (ideal land for growing crops) to **population density**
  - Discuss **Best Management Practices** for land use choices from **different stakeholder perspectives** (agriculture, urban/homes, nature etc)

How much of the  
Earth's surface is  
ideal for  
**GROWING  
CROPS?**



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Cities and  
Land Too  
Wet, Dry,  
Rocky

Roughly **3%** of the Earth  
(or 10% of Earth's land) has ideal  
conditions for growing crops

Mountains,  
Arctic,  
Antarctic,  
Desert



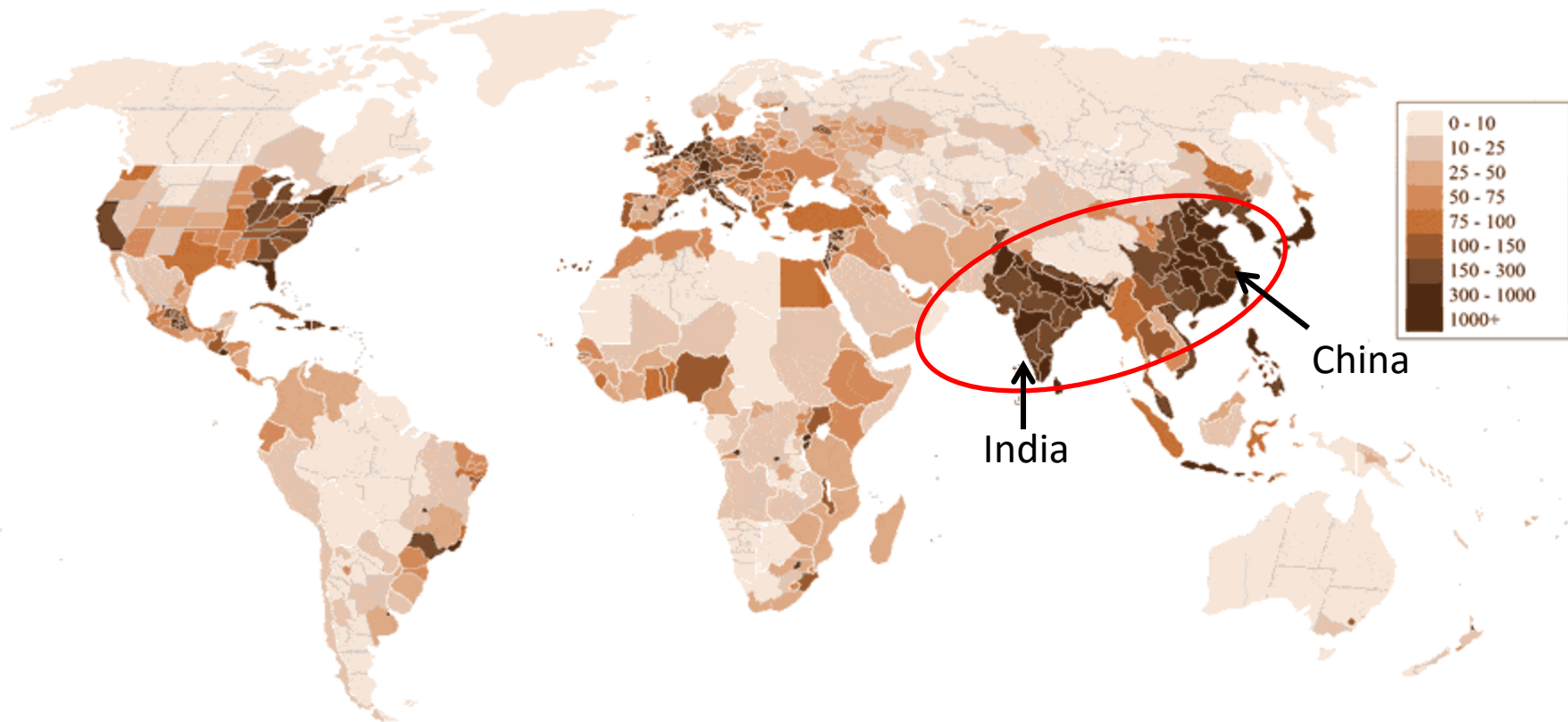
Oceans,  
Ice,  
Lakes,  
Rivers



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# WHY IS LAND A PRECIOUS RESOURCE?

## Population Statistics by Country:



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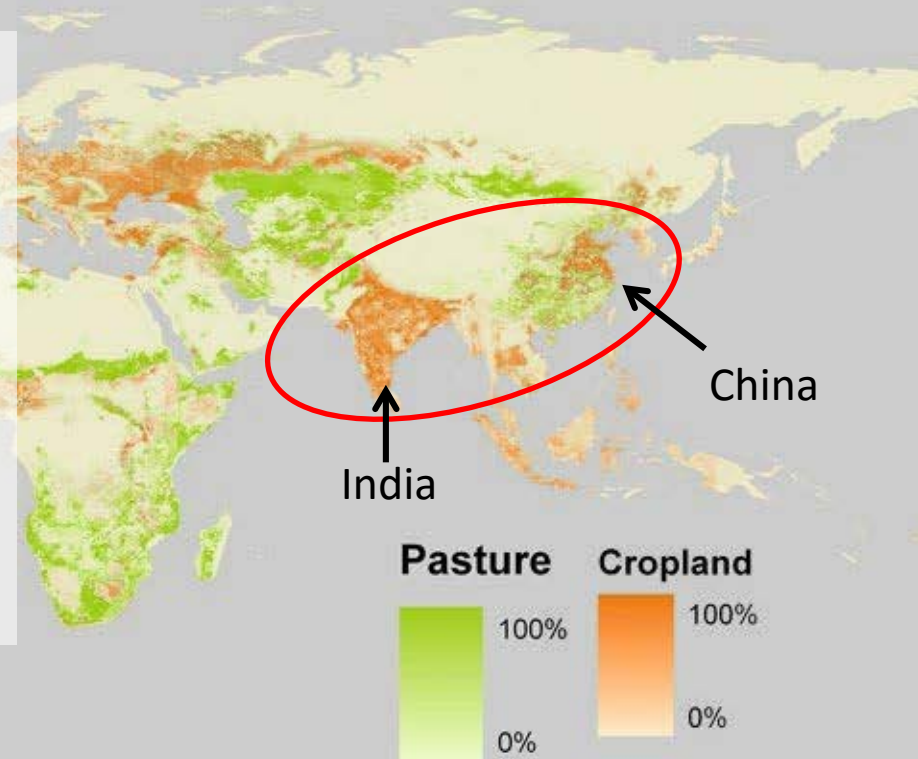


# WHY IS LAND A PRECIOUS RESOURCE?

## Agricultural Land:

**3% of Earth's surface has ideal crop growing conditions (arable land = cropland).**

With best management practices, innovation and technology we can use nearly **40%** of the total land to grow food or provide grazing for livestock.



# WORLD LEADERS ARE WORKING ON SOLUTIONS



17 Goals  
17 Mini-games  
1 FREE App



## GLOBAL HERO

Supporting the Sustainable Development Goals

