

# WELCOME TO OUTBREAK!

When the zombies attack, where should we run, where regroup, and where rebuild our lives? These critical survival questions can focus student attention on a highly motivating and dangerously overlooked fact: Geography skills can save you from an impending zombie apocalypse!

Developed by David Hunter, *Zombie-Based Geography* uses students' natural desire to survive zombie assaults to motivate study of a complete curriculum based on the 2012 8th Grade National Geography Standards.

Students then apply those skills in a simulation based on surviving when hordes of slaving zombies threaten to overrun their neighborhoods.



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## ● Why Zombie-Based Geography? ●

I love geography and I love zombies, but most of all, I love when learning happens outside of school and engagement happens in school. By building this curriculum, I wanted to show that learning could be done through far-out scenarios, or even just based on student interests. My hope is that this project will engage students, provide standards-based lessons for teachers, and support project-based learning.

This curriculum uses the 2012 8th Grade National Geography Standards. These standards were developed by the National Council for the Social Studies, the American Geographical Society, the American Association of Geographers, the National Council for Geographic Education, and the National Geographic Society. Students will learn to think like geographers and also learn to survive the zombie outbreak.

This curriculum also includes a companion graphic novel. *Dead Reckon* tells the story of a student struggling to survive in a zombie outbreak. The challenges set up in *Dead Reckon* are the same challenges students face in this curriculum. *Dead Reckon* is meant to keep students engaged and give them reasons to tackle the geographic problems they need to solve.

My goal was to prove that rigorous academic concepts could be learned through engaging scenarios. I believe I've been successful, but this is also just the beginning. The true opportunities in education and curriculum are just being approached. I look forward to a future where engaging learning experiences are built with students in mind.

—David Hunter

# Explaining the Project

## *Concept of Project 01*

### **Mapping the Outbreak: Project 01**

#### ***Project Goal***

The main goal of this project is to have students show their ability to display data on a map and analyze spatial relationships. Along the way they learn about geographic tools and how to choose appropriate tools.

#### ***Main Final Product***

At the end of the project, students will have completed a regional map displaying the four days of zombie attack data. The map will be accompanied by a short written prediction of the highest-risk locations for Days 5 and 6, with an explanation of how the student identified those locations.

#### ***Project Options***

With the exception of lesson 8, all of the mapping exercises in “Project 01: Mapping the Outbreak” use a blank outline map of the United States, which is provided as a handout in lesson 3. In lesson 8, students may use one of the three regional outline maps provided in that lesson: Southern California, the Puget Sound region of Washington State, or the U.S. Northeast. The choice can be yours or theirs. Or to make lesson 8 more relevant and challenging to your students, you might want to use a regional map of your area, however large or small you choose to define your region. This will require more effort and time from you and/or your students, including generating a regional outline map handout, similar to the three maps provided in lesson 8, and drawing up a Regional Attack Data handout for your region similar to the three such handouts provided in lesson 8. If you choose to have your students generate an alternative regional map, direct them to an atlas or a satellite photo of the region. Tracing a satellite image to create a map models the work that cartographers often used to do. However, many mapmakers are now working digitally with geographic information systems (GIS). Weigh the learning value against any time constraints to decide whether to expand the lesson with this option.

# Mapping the Zombie Outbreak

## Outline of Project 01

### Teaching Tip

The included graphic novel, *Dead Reckon*, tells a story of a student trying to deal with this same situation in order to warn others about the zombie outbreak.



### Handout

- Mapping the Zombie Outbreak

### Ask

How does geography help us stay ahead of the zombie outbreak?



### Handout

- Mapping the Zombie Outbreak Pre-assessment Quiz

### Teaching Tip

Through this project, students will be expected to learn these skills.



## Before the Outbreak: Project 01

Studying the Earth is at the heart of geography. In this first project, students are introduced to some of the *questions* geographers ask and the *tools* they use to try and find answers. Students will apply these tools as they create their own map and analyze the *spatial relationships* between cities. By recognizing these relationships, students will be able to predict the movement of the zombie outbreak and where zombies are most likely to attack next.

### Final Project Task

Students will need to create a map of the zombie attacks using data provided.

### Driving Question

How are geographic tools used to make predictions and find solutions?

## Pre-assessment

### Student Learning

1. How to *choose* appropriate maps and tools.
2. How to *create* maps to display data.
3. How to *analyze* distance and connections of major metropolitan cities.
4. How to *describe* patterns of migration and diffusion.

### Lessons

1. Intro to Geography
2. Different Types of Maps
3. Map Elements
4. Intro to Analyzing Spatial Relationships
5. Structures: Identifying Cities
6. Relationships: Examining Connections
7. Processes: What Moves and How?
8. Using Maps to Answer Questions and Show Data



**Summative Assessment Rubric—Pre- and Post-assessment Quizzes**

	1	2	3	4
<p><b>Characteristics of Geographic Tools</b></p> <p>NGS 1A Recognize characteristics and applications of maps, globes, aerial, and other images.</p>	<p>Cannot distinguish the following geographic tools:</p> <ul style="list-style-type: none"> <li>• Maps</li> <li>• Globes</li> <li>• Aerial images</li> <li>• Satellite images</li> <li>• Graphs</li> </ul>	<p>Recognizes tools, but has trouble identifying distinguishing characteristics of one or two of the following tools:</p> <ul style="list-style-type: none"> <li>• Maps (different types)</li> <li>• Globes</li> <li>• Aerial images</li> <li>• Satellite images</li> <li>• Graphs</li> </ul>	<p>Clearly identifies most geographic tools and identifies distinguishing characteristics of:</p> <ul style="list-style-type: none"> <li>• Maps</li> <li>• Globes</li> <li>• Aerial images</li> <li>• Satellite images</li> <li>• Graphs</li> <li>• GIS</li> </ul>	<p>Clearly identifies all geographic tools and identifies distinguishing characteristics of:</p> <ul style="list-style-type: none"> <li>• Maps (different types)</li> <li>• Globes</li> <li>• Aerial images</li> <li>• Satellite images</li> <li>• Graphs</li> <li>• GIS</li> </ul>
<p><b>Applications of Geographic Tools</b></p> <p>NGS 1C Evaluate when to use certain maps or other tools and technology to solve geographic problems.</p>	<p>Mixed up more than two of the geographic problems that the tools are suitable for.</p>	<p>Mixed up one or two of the tools that the geographic problems would be suitable for.</p>	<p>Clearly links each tool to the geographic problem that it would be suitable for:</p> <ul style="list-style-type: none"> <li>• Maps</li> <li>• Globes</li> <li>• Aerial images</li> <li>• Satellite images</li> <li>• Graphs</li> <li>• GIS</li> </ul>	<p>Clearly identifies when to use each tool, and suggests geographic problems that would be suitable for each tool:</p> <ul style="list-style-type: none"> <li>• Maps (different types)</li> <li>• Globes</li> <li>• Aerial images</li> <li>• Satellite images</li> <li>• Graphs</li> <li>• GIS</li> </ul>

# MAPPING THE ZOMBIE OUTBREAK

## Introduction

If the zombie virus was spreading, wouldn't you want to *know where it was going*? In this project, you will learn to *use geographic tools and data* to track the spread of the zombie apocalypse.

### Driving Question

How are *geographic tools* used to *make predictions* and *find solutions*?

### What You Will Produce

Create a map using the zombie attack data provided.

### Your Map Will

- Include important *map features* (direction, symbols, legend, index, scale)
- Identify *major cities*
- Show the *spread* of zombie attacks
- Show the *connections* between cities that help the zombie virus spread

### You Will Also Explain

- How you decided where the zombies would spread

### By the end of this project, you will be able to answer these questions:

- What the heck is geography?
- What tools do geographers use and why?
- How do I design a map?
- Where are the major cities in my country?
- How are major cities connected and how do they relate to each other?
- What is the process of diffusion?
- How do I display data using maps?

