National Air and Space Museum — Smithsonian

Content Guide: Finding Our Way (Geography and GIS)

Description

How do we know where we are? The elements of this suite will take students on a mission to locate a fallen drone while learning the history of navigation and map-making; through an exploration of tools overtime that have helped us understand and navigate the world around us; a class-wide Goosechase competition to locate different elements of their own community that are important for GIS mapping; and a hands on experience making GIS-inspired maps of our neighborhoods. Through these experiences, students will better understand the wide variety of information we can gain through maps and GPS.

Standards

Grades: 6-8

DCPS: 6.1.6; 6.1.8; 6.1.9; 6.1.10;
C3: D2.Geo.2.6-8., D2.Geo.1.6-8., D2.Geo.6.6-8;
CCSS: D4.1

D4.1 Construct arguments using claim and evidence from multiple sources, while acknowledging the strengths and limitations of the arguments

6.1.6 Explain the relationship between lines of longitude and time zones.

6.1.8 Ask geographic questions and obtain answers from a variety of sources such as books, atlases, and other written materials; statistical source material; fieldwork and interviews; remote sensing, word processing & GIS. Reach conclusions and give oral, written, graphic, and cartographic expressions to conclusions.

6.1.9 Give examples of how maps can be used to convey a point of view, so that critical analysis of map sources is essential.

6.1.10 Explain that people develop their own mental maps or personal perceptions of places in the world, that their experiences and cultural influence their perceptions, and that these perceptions tend to influence their decision making.

D2.Geo.1.6-8 Construct maps to represent and explain the spatial patterns of cultural and environmental characteristics.

D2.Geo.2.6-8 Use maps, satellite images, photographs, and other representations to explain relationships between the locations of places and regions, and changes in their environmental characteristics.

D2.Geo.6.6-8 Analyze how relationships between humans and environments extend or contract spatial patterns of settlement and movement.

Historical/Science Content

How has navigational technology changed over time? Explore wayfinding over time- discovering tools and methods used by those navigating the sea, air and space. Analyze images to determine how they might be helpful in finding a fallen drone. And finally, explore a Story Map on meteorite falls & finds to better understand how GIS maps can tell a story. Link here to a powerpoint presentation ready to be implemented in your classroom with students; all teacher notes are included.

Hands-on Activity

Tell a story using a map! In this activity, students are challenged to create their own arcGIS- styled Story Map in flipbook format. Find instructions, materials needed, and resources in this activity guide.

Artifact Engagement

You are gifted a free, all expenses paid trip to go anywhere within the United States (or if you live outside the United States, within your country). Where would you go? Challenge students to explore the Finding Our Way Artifact Immersion to learn how to navigate to their destination. Students will gather data, and explore different modes of transportation as well as people and objects. Use this Teacher Guide to help guide your students' experience and this Extension Example to show how students can exhibit their navigational research.

Class Wide Activity

Goosechase

What are the different elements of a neighborhood? Have students review the information on GPS and satellites and then answer questions and prompts taking them around a neighborhood, exploring different parts like transportation, parks, and wayfinding measures. Use this Teacher Guide for Team Names and tips.

If you want to incorporate Goosechase into your experience you need to submit a reservation for an Anytime Scavenger Hunt. You will receive the unique game code and password for your game in the initial confirmation for your Anytime Scavenger Hunt. This code gives you access to a private game that is only accessible to those who you share the game code with.

Questions? Email us NASMFieldTrips@si.edu

Evaluation

We are always interested in hearing about your experience and ways in which you think we can do things better. Please provide your feedback by completing the Virtual Field Trip [Evaluation](#).

Usage Guidelines

Questions? Email us NASMFieldTrips@si.edu