

RESOURCE LIBRARY
ACTIVITY : 1 HR

Summiting Everest Today

Students watch a video about the rescue of two impaired climbers and discuss what it takes to summit Mount Everest today. In groups, students explore resources outlining what it costs to summit Everest. They learn the important role Sherpas play in a successful summit, as well as what one must plan for to leave no trace.

GRADES

6 - 8

SUBJECTS

Biology, Health, English Language Arts, Social Studies, Economics

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8 Links, 1 PDF

OVERVIEW

Students watch a video about the rescue of two impaired climbers and discuss what it takes to summit Mount Everest today. In groups, students explore resources outlining what it costs to summit Everest. They learn the important role Sherpas play in a successful summit, as well as what one must plan for to leave no trace.

For the complete activity with media resources, visit:

<http://www.nationalgeographic.org/activity/summiting-everest-today/>

In collaboration with



DIRECTIONS

Mount Everest: What Goes Up Should Come Down Unit Driving Question: How can we enjoy and explore unique natural areas while still protecting our environment?

The Costs of the Climb Lesson Driving Question: What are the impacts of the climb?

1. Engage students in an analysis of this Everest infographic as they infer various costs based on their observations.

- Distribute to students this Everest infographic created using data from 1900 to 2016. Ask students: *Based on our new, inclusive definition of costs, what do you notice on this infographic that is an example of a cost?*
 - Conduct another Think, Pair, Share where students discuss what they notice on the infographic that would be a cost. Have students share their partner's observation, and record them on the whiteboard or chart paper.
- Distribute the Cost of the Climb handout to each student. Ask: *What categories of costs can you identify? Which observation would go in that category?*
 - Conduct a class discussion until students have identified examples from each category on the *Cost of the Climb* worksheet: physical or human body, financial or money, material or supplies, environmental, and personnel or workers.
 - Demonstrate adding one of these student-identified costs to the appropriate area of the *Cost of the Climb* worksheet. For example, hired workers would go under personnel; death, altitude sickness, or frostbite would fall under physical costs.
- Show students an image of the climber known as green boots. Share with students that green boots died on Everest in 1996, but his body is still there.
 - Ask: *Why is this climber's body still on the mountain? What else is left with him?* (Answers may include oxygen tank, climbing pack.)

2. Have students read articles to learn in-depth about what it takes physically, financially, materially, environmentally, and in personnel to summit Everest.

- Have students read two or more of the following articles and use what they discover in each reading to complete their *Cost of the Climb* worksheet.

1. [The Everest Moral Dilemma](#)

2. [Nepal Slashes Everest Fees; Will Lower Costs Increase Crowds of Climbers?](#)

3. [Alpine Institute's Everest Equipment List-2018](#)
4. [Sherpas: The Invisible Men of Everest](#)
5. [NPR: The Science Behind the Super Abilities of Sherpas](#)
6. [Leave No Trace: Plan Ahead and Prepare in Mountaineering](#)

3. Have students share what they discovered while reading with peers and reflect on the costs of summiting Everest.

- Divide students into groups of three to four. Have students share with their group members, who read different articles in Step 4, what they learned about the costs of summiting Everest. Have students record new ideas from their group's discussion to their [Cost of the Climb](#) worksheet.
- Conduct a class discussion for students to share their responses to the final question on the *Cost of the Climb* worksheet. Ask: *What are the major impacts of climbing Mount Everest on the mountaineers? What about on the mountain?*
- Conclude the discussion with: *The influential mountaineer Reinhold Messner is rumored to have said, "Everyone knows what climbing mount Everest costs; but only a few know what it is worth." What do you think?*

Modification

Step 2: Give students 20 minutes for reading with the expectation that they will be reading at least two of the provided articles. If they complete two and have time for an additional article, then they may read one or more of the other articles provided.

Modification

Step 2: Rather than having students record categories of expenses and itemize costs by hand, tie in computer skills learning, and teach spreadsheet skills. Then, allow students to use formulas to calculate totals in expenses.

Informal Assessment

Collect and review students' [Cost of the Climb](#) worksheet, looking for at least one example of each type of cost (physical, financial, material, personnel, and environmental). Make suggestions for resources to review for students who may be missing examples from the main cost categories.

Extending the Learning

Math and Computer Skills Extension: Have students use the resources provided in this activity to predict an overall cost for an individual climbing Mount Everest that includes travel, equipment, personnel, and other potential monetary expenses. Students practice using computer-based spreadsheets to label and categorize data and develop formulas to predict expenses. Use the spreadsheet to create a graph that breaks down the fraction/percentage of expenditures for items such as regulatory fees, supplies, and expedition charges.

ELA Argumentative Writing: Have students debate verbally or through argumentative writing whether or not climbers should tackle Mount Everest if they are heavily reliant upon supports.

OBJECTIVES

Subjects & Disciplines

Biology

- Health
- English Language Arts

Social Studies

- Economics

Learning Objectives

Students will:

- Identify and categorize the costs of climbing Mount Everest.
- Understand that not all costs are financial.

Teaching Approach

- Project-based learning

Teaching Methods

- Discussions
- Jigsaw

- Multimedia instruction

Skills Summary

This activity targets the following skills:

- 21st Century Student Outcomes
 - Information, Media, and Technology Skills
 - Information Literacy
 - Learning and Innovation Skills
 - Communication and Collaboration
 - Critical Thinking and Problem Solving
- 21st Century Themes
 - Environmental Literacy
 - Financial, Economic, Business, and Entrepreneurial Literacy
 - Global Awareness
- Critical Thinking Skills
 - Analyzing
 - Applying
 - Understanding

National Standards, Principles, and Practices

COMMON CORE STATE STANDARDS FOR ENGLISH LANGUAGE ARTS & LITERACY

- **CCSS.ELA-LITERACY.RH.6-8.2:**

Determine the central ideas or information of a primary or secondary source; provide an accurate summary of the source distinct from prior knowledge or opinions.

- **CCSS.ELA-LITERACY.RI.6.7:**

Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.

THE COLLEGE, CAREER & CIVIC LIFE (C3) FRAMEWORK FOR SOCIAL STUDIES STATE STANDARDS

- **D2.Eco.1.6-8:**

Explain how economic decisions affect the well-being of individuals, businesses, and society.

- **D2.Geo.4.6-8:**

Explain how cultural patterns and economic decisions influence environments and the daily lives of people in both nearby and distant places.

Preparation

What You'll Need

REQUIRED TECHNOLOGY

- Internet Access: Required
- Tech Setup: 1 computer per classroom, 1 computer per pair, Monitor/screen, Presentation software, Projector, Speakers

PHYSICAL SPACE

- Classroom

GROUPING

- Heterogeneous grouping
- Large-group instruction
- Small-group learning
- Small-group work

BACKGROUND & VOCABULARY

Background Information

The cost of summiting Mount Everest includes both gear and hiring specialized guides known as Sherpas who will manage equipment, cook, and guide climbers. Sherpas are Nepalese people who live at high altitudes and are better acclimated to the conditions of Everest, but they are also the group with the highest mortality on the mountain. As the number of people attempting to summit rises, the costs to the mountain, local people, and climbers continue to increase.

Prior Knowledge

Recommended Prior Activities

- [Danger Versus Desire: The Inspirational Power of the Peaks](#)
- [Mountaineering as Exploration, Recreation, and Vocation](#)
- [The Evolution of Climbing Everest](#)

Vocabulary

Term	Part of Speech	Definition
altitude sickness	<i>noun</i>	illness caused by reduced oxygen levels at high elevations.
expedition	<i>noun</i>	journey with a specific purpose, such as exploration.
financial	<i>adjective</i>	having to do with money.
Mount Everest	<i>noun</i>	highest spot on Earth, approximately 8,850 meters (29,035 feet). Mount Everest is part of the Himalaya and straddles the border of Nepal and China.
personnel	<i>noun</i>	employees or all people working toward a common goal.
physical	<i>adjective</i>	having to do with the body.
Sherpa	<i>noun</i>	people and culture native to the Himalayan region of Nepal and China. Sherpa often serve as mountaineer guides and porters on mountain-climbing expeditions.

For Further Exploration

Articles & Profiles

- [Mount Everest.net: Deaths on Mt. Everest](#)
- [British Medical Journal: The First Ascent of Mount Everest](#)

