Teacher Guide

Too Close for Comfort

Key idea: Distant views that take in a lot of area are often best for exploring large features.

Time: 15 minutes

Objective

Students try to identify a mystery object in three series of photos. First they look at an extreme close-up photo and guess what they're looking at. Each subsequent photo of the same object zooms farther away.

Begin a discussion

First, discuss how perspective can change perception. What are some vantage points from which students have looked down on Earth? Examples might include the top of a hill, a tall building, or an airplane.

> Were they surprised by the view?

> What's the smallest thing they could see? The largest?

> Did they make any discoveries?

Do the activity

1. Divide students into three teams and have them move far enough apart so they can't hear each other.
2. Give each team one envelope of photos—but tell them not to open it! Tell each team to appoint a leader who will handle the envelope.
3. Without letting anyone see the four photos, the leader should find and remove Photo A and lay it down so everyone can see it.
4. Working independently and silently, everyone should write down their guesses about what the photo shows.
5. Repeat the process with photos B, C, and D.
6. Have teams switch envelopes and repeat the process until each group has made guesses about each photo.

STANDARDS ALIGNMENT

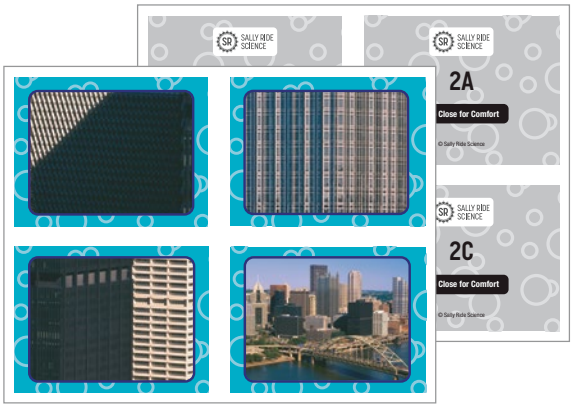
Geography

I.2: The World in Spatial Terms: How to use mental maps to organize information about people, places, and environments in a spatial context.

I.3: The World in Spatial Terms: How to analyze the spatial organization of people, places, and environments on Earth's surface.

MATERIALS AND PREPARATION

Prepare three sets of photos with four photos in each set. Print out the *Too Close for Comfort Photos*, glue together the front and back of each sheet, and cut the photos apart to create four cards in each set with labels on the back. Place each set of cards in an envelope.



For further discussion

> What is an example of something you can examine best up close?

> Do you know who or what has observed Earth from the farthest away? Ask students to take a guess at how far. *[The space probe* Voyager 1 *sent back a photo of Earth from about 6 billion kilometers (3.7 billion miles) away. From that distance, Earth appears as a pale blue dot.]*

Interpret the results

Have students come back together as a group and compare their guesses.

1. In the first photo in each set, what did students think they were looking at?
2. How did their perception change when they looked at the second, third, and fourth photos?
3. Why does zooming farther away make a difference?
4. What are some features students noticed only from the farthest view?