Too Close for Comfort
Zooming out for a faraway view sometimes gives us the best view.

Purpose: Distant views that cover a lot of area are often best for exploring large features.
Length: 15 minutes
Materials: Three sets of photos, four photos in each set, labeled on the back.

Students get a chance to identify a mystery object in a series of photos. They see an extreme close-up photo and guess what they’re looking at. Each subsequent photo of the same object zooms farther and farther away.

First, discuss how perspective can change perception. Then give students a chance to see for themselves.

Pre-Chat Time
What are some vantage points from which students have been able to look down on Earth? (top of a hill, tall building, airplane, etc.)
• Were students surprised by the view?
• What’s the smallest thing they could see? The largest?
• Did they make any discoveries?

The Investigation — What’s the Mystery Object?
• Students break into three teams and move far enough apart so they can’t hear each other.
• Each team receives one envelope of photos—but they shouldn’t open it!
• Each team appoints a leader who will handle the envelope.
• Without letting anyone see the four photos, the leader finds and removes Photo A and lays it down so everyone can see it.
• Everyone independently and silently writes down their guesses about what the photo shows.
• This process is repeated with photos B, C, and D.

The teams switch envelopes and repeat the process until each group has made guesses about each photo. Then have students come back together as a group and compare their guesses.
• In the first photo, what did students think they were looking at?
• In the second?
• Why does zooming farther away make a difference?
• What are some features students noticed only from the farthest view?

Chat Time
• Can you think of something you can examine best up close?
• Do you know who or what has observed Earth from the farthest away? (Answer: satellites) Ask students to take a guess at how far. (Answers: from about 330 km to 1000 km [about 200 to 600 miles] depending on the satellite; the space station orbits at about 350 km [220 miles] above Earth)
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1B Too Close for Comfort

1A Too Close for Comfort

1D Too Close for Comfort

1C Too Close for Comfort