

# Read Earth from above

A printable satellite-clue investigation for grades 6-12. Students separate observation from inference, compare hypotheses, and revise after new evidence.

**45-minute lesson - no login needed**

Print pages 2-5 for student groups

# Teacher quick start

## LEARNING OBJECTIVE

Students will make evidence-based geographic hypotheses from satellite imagery and explain which visible clues increased or reduced their confidence.

## RUN THE LESSON

1

### Model

Project Scene A. Name only visible evidence before interpreting it.

2

### Investigate

Groups complete Scenes A-C with recorder, mapper, skeptic, and speaker roles.

3

### Defend

Each group gives a claim, three observations, and one contradiction.

4

### Revise

Reveal the teacher notes. Students update the hypothesis, not just the answer.

## FOUR POINT EVIDENCE RUBRIC

1 - Lists a visible feature

2 - Connects a feature to a geographic process

3 - Compares two plausible regions

4 - Weighs contradictions and revises

## Scene A - River coast



**Start broad: water, relief, land cover, settlement, then transport.**

Three observations (what is visible)

Two hypotheses (where or what kind of place)

One contradiction (what does not fit yet)

Confidence 1 2 3 4 5    Strongest clue:

## Scene B - Urban airport



**Separate the transport footprint from the surrounding city pattern.**

Three observations (what is visible)

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Two hypotheses (where or what kind of place)

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|  |

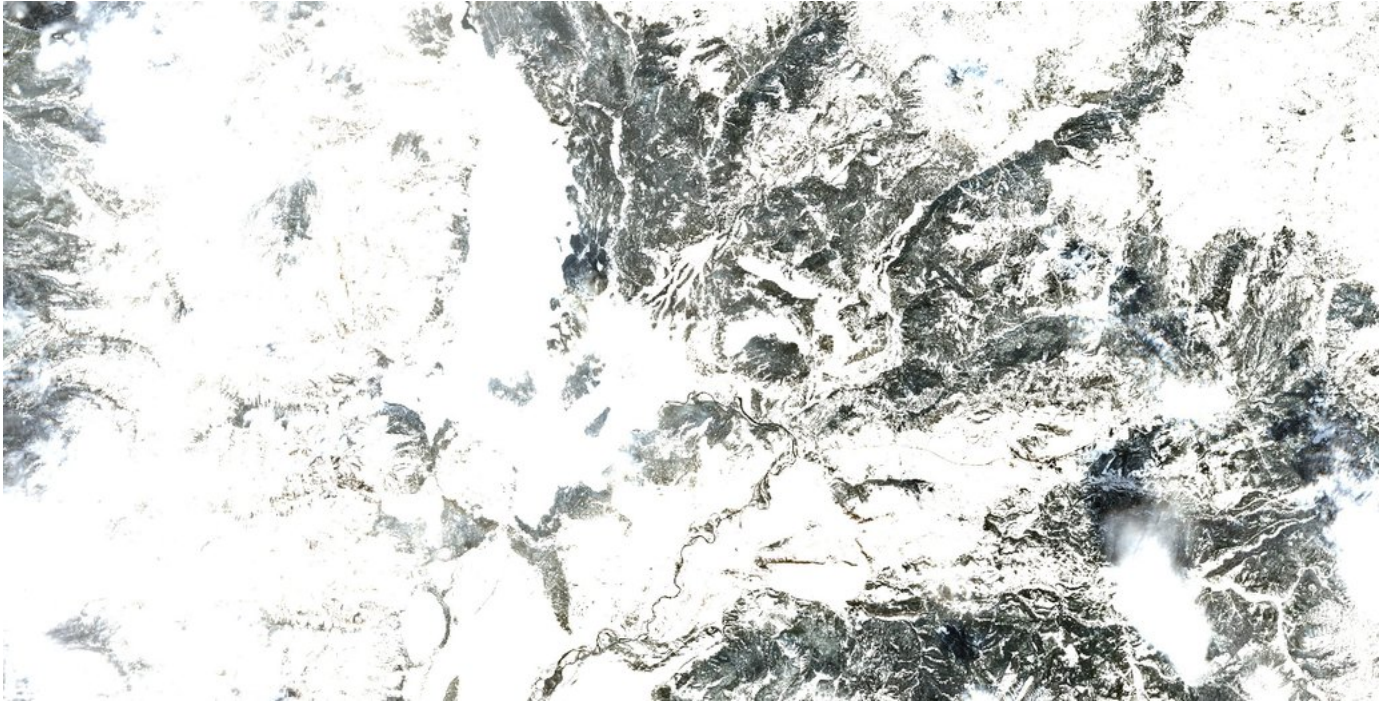
One contradiction (what does not fit yet)

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Confidence 1 2 3 4 5 Strongest clue:

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## Scene C - Snowy relief



**Ask what snow, shadows, valleys, and image quality can - and cannot - prove.**

Three observations (what is visible)

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Two hypotheses (where or what kind of place)

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One contradiction (what does not fit yet)

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Confidence 1 2 3 4 5    Strongest clue:

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# Teacher notes and exit ticket

## Scene A - River coast

High-energy surf, a river mouth, patchwork pasture, wet vegetation, sparse roads. A strong hypothesis is a cool, wet maritime farming region. Students should avoid treating green land alone as decisive.

## Scene B - Urban airport

Long parallel runways, terminal aprons, dense settlement, engineered waterways, pale dry ground. Ask whether the airport serves the city center or a regional edge, and what water management suggests about climate.

## Scene C - Snowy relief

Branching valleys, steep relief, extensive snow, dark exposed ridges, and imaging/cloud limits. Snow may reflect elevation, latitude, season, or all three. The image supports a region type more strongly than a country.

## EXIT TICKET

Which clue changed your mind most, and why?

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What did your group infer too quickly?

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Name one clue you would seek in a second image.

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