

Noticing the Details: Observations and Inferences

Student Investigation Packet

Name: _____

Class: _____

Date: _____

Teacher: _____

In this lesson we will practice making careful observations and building evidence-based inferences like scientists.



Satellite Earth

Exploring details from above

Your Task

Visit [NASA Visible Earth](https://visibleearth.nasa.gov) and choose one image.
Use the table below to record three details you see.

Details

1.

2.

3.

Class Observations

What are some key details our class observed together?
Record a few of our shared observations below in complete sentences.



Digital Access

Website:

visibleearth.nasa.gov

Task:

Choose one image



Comparing What We See

Looking for similarities and differences

Your Task

Study the three images below.

Write details that are similar and details that are different.



Similarities

1. _____
2. _____
3. _____
4. _____

Differences

1. _____
2. _____
3. _____
4. _____

Which details were hardest to compare? Explain your thinking.

Which details were easiest to compare? Explain your thinking.



Observations, Inferences, and Evidence



Learning to notice, think, and support our ideas like scientists.



1. KEY IDEAS

Fill in the blanks to complete each idea.



Observation

Information you get using your five senses.

I notice _____



Inference

A conclusion or explanation based on observations and what you  ly know.

I think _____



Evidence

Facts or observations that support an inference.

I know this because _____



Evidence connects observations and inferences.

Good scientists use evidence to support their ideas.



Using Evidence Like a Scientist



Good scientists use evidence to support their thinking.



2. EXAMPLE

Look at the example below to see how the ideas work together.

Observation (What I notice)	Inference (What I think)	Evidence (What leads me to think that)
 There are footprints in the sand.	 Someone walked here earlier.	 Footprints show where someone has been.



3. THINK LIKE A SCIENTIST

- ✓ I always start with what I can observe.
- ✓ I use what I already know to make inferences.
- ✓ I look for evidence to support my inferences.
- ✓ I am open to new evidence that can change my thinking.



4. YOUR TURN

Write your own example.

Observation (What I notice)	Inference (What I think)	Evidence (What leads me to think that)

Observations vs. Inferences

Read each statement. Determine if it is an observation or inference, then write it in the correct column below.

- It must be hot.
- The plant is healthy.
- The ice is melting.
- The cat is hungry.
- The plant has five leaves.
- There are footprints in the sand.
- The cat is meowing.



Observation

1. _____
2. _____
3. _____
4. _____



Inference

1. _____
2. _____
3. _____
4. _____

Which statement was hardest to classify? Explain your thinking.

Write Down Observations and Inferences



Your Task

Study the images carefully.

Write down observations and inferences about what you see at the beach.

Observation

Inference

Which Inference Fits Best?

Which inference is best supported by the evidence?

- A. The beach is crowded
- B. It is winter at the beach.
- C. Everyone is just arriving.

What evidence from the images supports your choice?

Evidence

Why are some inferences stronger than others?

Could another student make a different inference? Explain.



Your Mission: Practice using your senses to notice details, make inferences, and support your thinking with evidence—just like a scientist!

1 Choose a Place

Pick a nearby location to observe. It could be a park, your backyard, a street, a room, or another safe place.



My location: _____

2 Observe Using Your Senses

Use your senses to carefully notice what is around you.



Sight



Hearing



Smell



Touch



Taste

3 Record 5 Observations

Write only what you directly see, hear, smell, touch, or taste.

1

2

3

4

5

4 Make 5 Inferences

Use your observations and what you already know to make inferences. Support each inference with evidence from your observations.



Inference 1: _____

Evidence from my observations: _____



Inference 2: _____

Evidence from my observations: _____



Inference 3: _____

Evidence from my observations: _____



Inference 4: _____

Evidence from my observations: _____



Inference 5: _____

Evidence from my observations: _____

5 Reflect

Think about your thinking!



Which inference was hardest to support with evidence?



Think Like a Scientist: Good scientists notice details, make thoughtful inferences, and always look for evidence to support their ideas.