

OBSERVING

# Making Qualitative Observations

An observation is an act of noting and recording an event, characteristic, behavior, or anything else detected with an instrument or with the senses. Observations can be qualitative or quantitative. While quantitative observations are expressed in numbers, **qualitative observations** include descriptions of sights, sounds, smells, and textures. Qualitative observations are important to scientific investigations. You just might observe something unexpected that leads you to ask new questions.

Carefully inspect the diagram. Then record as many qualitative observations as possible. Remember, qualitative observations are descriptions, not measurements. Also, do not go beyond observing by trying to explain anything in the diagram.



Observations: \_\_\_\_\_

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**Challenge** List some additional qualitative observations you might be able to make if you were observing the actual platypus instead of a diagram.

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OBSERVING

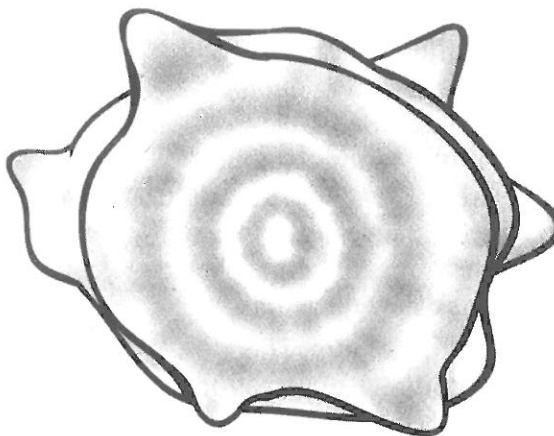
# Making Quantitative Observations

While qualitative observations are descriptions, **quantitative observations** are expressed in numbers and include records of time, temperature, mass, distance, and volume. Scientists make quantitative observations whenever possible. That way, others will know exactly what was observed. It is much easier to compare quantitative observations from different experiments than it is to compare qualitative observations.

Record as many quantitative observations as you can about the diagram of a cross section of a hailstone on the right. Remember that observations are just that; do not go beyond observing by trying to explain anything about the hailstone.

**MATERIALS**

metric ruler



Observations: \_\_\_\_\_

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**Challenge** If you had the actual hailstone in front of you, what other quantitative observations could you make? What tools would you need to make these observations?

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Observing