

All About Animal Needs

Investigation Data Sheet



Animals Need Oxygen

One of the most important animal needs is the need for air. This is especially true of young or developing animals such as baby chicks. Baby chicks develop within hard-shelled eggs so that they're protected.

Objective

Observe how baby chicks get the air they need to survive through their hard egg shells.

Materials

- a container
- some water
- a plate
- an unfertilized chicken egg (You can get this from your local grocery store.)

Safety Notice: All applicable laboratory safety rules must be followed. Students should not perform any experimental activity without the teacher's supervision and express permission. Students must follow safety guidelines and wear appropriate protective gear.

Procedure

1. Fill the container halfway with warm water. Place the egg inside the container. Spend a few minutes observing the egg. Does it sink or float? You should see some bubbles coming from the egg. What part of the egg do the bubbles come from? Record your observations in the space below.

2. Take a closer look at the egg inside of the container. While the egg shell is hard, the bubbles you see escaping from the egg are evidence that the shell is not solid. It is porous. This means the shell has tiny holes in it. Air can move both from the inside of the egg, out...and from outside of the egg, in.
3. Carefully crack open the egg onto a plate. Identify the egg white and yolk. The egg white is the part of the egg that would provide food and nutrients to the developing chick. Now take a close look at the cracked shell. Although the shell is porous, the tiny holes are too small to see.

Conclusions

- Why is it important that the holes in the shell of the egg are very small? What would happen if the holes were larger?

- Make a list of how other animals get the oxygen they need to survive.

- Describe what it must be like for a chick inside its protective shell. How does it meet all of its needs? Use the space at the bottom of the page to draw pictures of what it might be like for the animal.
