

THE AIR CATCHER

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A. Question: *What and where is air?*

B. Materials Needed:

1. A medium plastic bag.
2. One plastic sandwich bag per student

C. Procedure:

1. Take the medium size garbage bag, open its mouth and ask students: “What’s in the bag?” (Anticipated answer: ‘nothing’).
2. Move the bag now with two hands back and forth (like wanting to catch a bug in a bag), then quickly close the mouth of the bag with a twisting motion.
3. Ask the students: “What do I have in the bag now?”
4. Distribute sandwich bags to the students and let them try to catch air in their own seats, without blowing into the bag.

D. Anticipated Results:

The students will collect air that is odorless and colorless. After they have collected their air, they will twist the bag to trap it. They can then feel the firmness of the bag, demonstrating that the bag is not empty.

E. Thought Questions for Class Discussion:

1. What was filling the bags?
2. Can we catch air under the bench or behind the door?
3. Is the air the same everywhere?
4. How else can we fill the bag?
5. Would the material in the bag be the same if we blew in it?
6. How can we keep the bag inflated?
7. What would happen if we hit the inflated small plastic bag with the palm of the other hand?

F. Explanation:

Air is found everywhere. The plastic bags may be filled with air above the table, under the table, behind the door or anywhere else. The bags can also be inflated by blowing in them, but then the bags would contain exhaled air. This air is different because it has a higher percentage of carbon dioxide (CO₂) and more water vapor.

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When the filled bag is slammed between the two palms of the hands, it will burst with a loud pop. This explosion is caused by the sudden expansion of the air rushing out of the torn plastic bag. An common example of this is a popping balloon.