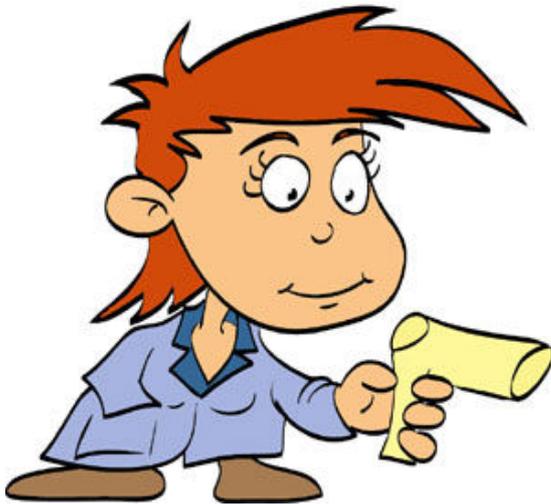


IN THE AIR STREAM



All: In the Air Stream

Characters

Narrator 1 – Speaks like James Bond

Narrator 2 – Speaks like Dr Evil

Mike Raphone – Exaggerated hand movements like a game show model.

Professor IM Hip - A person with an obvious love of science facts that just oozes cool.

Narrator 1: Welcome young scientists to the marvels of air pressure.

Narrator 2: But before we begin, we'd like you to put your hands together for our incredible assistant Mr ...

Narrator 1 & 2: Mike Raphone

Assistant: (take a bow)

Narrator 1: As we progress through this activity our wonderful assistant...
(outstretch hands toward assistant) Mike, will demonstrate.

Narrator 1: To prepare for this experiment you'll need:

(Assistant presents each object to the audience with flowing hand movements)

Narrator 2: 1 balloon blown up and tied

Narrator 1: 1 hair dryer plugged in and switched on at the wall

Narrator 1: a 15cm x 2cm strip of tissue paper

Narrator 2: a stopwatch to time 1 minute

Narrator 1: and finally 1 small hoop.

Narrator 2: Today we are going to place this balloon into the airstream that is emanating from **this powerful** hair dryer.

Narrator 1: Please take a moment to tell the person next to you what you think will happen to the balloon.

Narrator 2 : Starting from...

All: NOW!

(After 1 minute ring a bell)

Narrator 1: *(insert name)* what do you think will happen?

Student: *(Give them time to answer)*

Narrator 1: That's a good prediction *(insert name)*.

Narrator 2: *(insert name)* what is your prediction?

Student: *(Give them time to answer)*

Narrator 1: That's a good prediction *(insert name)*

Narrator 2: OK, next our capable assistant will carry out the demonstration.

All: Please don't attempt this at home without responsible adult supervision.

Assistant: *(turns on hairdryer & places balloon into the resulting airstream)*

Narrator 1: Wow! I bet you didn't expect that to happen. I wonder why it didn't just fly up in the air and then fall onto the floor?

Narrator 2: That's an excellent question N1. Hopefully we will get you an answer before the end of this act.

Narrator 1: Next, our able bodied assistant will slowly turn the hairdryer to the side while the balloon is in the airstream.

Narrator 2: Tell the person next to you what you think will happen.

Narrator 1: *(insert name)* what do you think will happen?
(Assistant turns on hairdryer)

Narrator 2: Ok, now tell your partner why you think it stayed where it did.

(Give them a little time then ring the bell)

Narrator 1: *(Insert name)* what is your prediction?

Narrator 1: That's a good/interesting prediction.

Narrator 2: *(Insert name)* what is your prediction?

Narrator 2 : That's a good/interesting prediction.

Narrator 1: We'd now like to introduce our resident science expert Professor I.M Hip for some cold hard facts that may help you with your explanation.

Professor I.M Hip: Daniel Bernoulli (1700:1782) is best known for his work with air pressure. He discovered that slow moving air goes towards fast moving air. The air coming out of the hair dryer is moving really fast. The air around us in this room is moving rather slowly. So the slow moving air actually pushes towards the fast moving are.

Narrator 1: So professor, are you saying that the air around us is pushing towards the fast air from the hairdryer.

Professor I.M Hip: Precisely.

Narrator 1: So people, now why do you think the balloon stays in the air?

(Give them a little time)

Narrator 2: *(Insert name)* why do you think it stays there?

Student – *(Let them give you an answer).*

Assistant: Ok, this is what is happening. The fast air from the hair dryer is pushing the balloon up. Slow air is moving constantly into the airstream and this keeps the balloon in one spot by pushing in from the sides.

All: *(Clear throat at same time and cold stares directed at the assistant)*

Assistant: *(Mumbles to the audience)* Oh yeah, I remember, I'm just the humble assistant.

Narrator 1: So now here is a question for you. What is happening to the air on the top of the balloon?

Narrator 2: I think that the air is going around the balloon and is leaving a section of stationary air just at the top.

Narrator 1: Just have a quick chat to the person sitting next to you about what *you* think is happening to the air on the top of the balloon.

Narrator 2: (give them a moment to hypothesize then ring a bell to gain their attention)

Narrator 2: *(Insert name)* what do you think is going on?

Narrator 2: That's an interesting prediction.

Narrator 1: *(Insert name)* what do you think is happening to the air at the top of the balloon?

Narrator 1: That's an interesting hypothesis.

Narrator 2: In order to test what is happening on top of the balloon, Mike will hold this small strip tissue paper just above the balloon while the hair dryer is on.

Narrator 1: Now we'd like you to complete this sentence...

Professor: Since the strip of paper(describe action)..... the air at the top of the balloon must be

Narrator 1: *(give them a little time and ask a few people for their thoughts NB You might have to)*

Narrator 2: Now let's have a bit of fun.

Narrator 1: We need a victim ... oops... a volunteer to try and get the balloon through the hoop using the hair dryer.

(Now have a bit of fun with it)

Possible Extensions – Try and do it with a ping pong ball.

- Try and talk the school grounds keeper into doing it with 3 balloons and a leaf blower. :)

For more science experiments be sure to visit

http://www.adrianbruce.com/science/science_experiments.htm

and

<http://www.captaincuriosity.net/>

If you have some comments feel free to email them to

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