The Wandering Albatross

(or: How far did you get today?)

Student: I’ve never heard of that!

*Tutor: The Pitot tube?*

I’ve never heard of the Pitot tube. What is it?

*There’s a Pitot tube on most planes.*

Is there?

*Yes.*

What does it look like?

*It’s a small tube mounted on the outside.*

Even on big planes?

*Especially on big planes.*

What is a Pitot tube?

*A pipe.*

Where?

*Mounted on the fuselage, near the pilot’s cabin, usually.*

On the outside?

*Yes. Pointing fore and aft.*

Pointing fore and aft?

*Yes.*

Pointing forwards, you mean?

*Yes.*

And what does it do?

*It measures air speed.*

How fast the plane is going?

*Yes. Its speed.*

Its speed through the air, anyway.

*Yes.*

Its air speed, that is.

*Yes. That’s right.*

That’s not always the same as its speed over the ground.

*No. It’s not. Not always, anyway.*

Not if it is flying in high winds.

*No. Definitely not.*

If there’s a strong wind against the plane, for instance.

*What then?*

Then its air speed will be much more than its speed over the ground.

*Well, yes. It will be.*

The air speed minus the wind speed.

*Yes.*

And if the wind is behind the plane the air speed might be the same.

*But the speed over the ground will be more.*

The air speed plus the wind speed.

*That’s right! And that’s where the pitot tube comes in.*

But why were you thinking about Pitot tubes in the first place?

*Well, I was reading about the albatross.*

The albatross?

*The Wandering Albatross.*

That’s the biggest albatross of all.

*Yes. It is.*

And where does the Pitot tube come in?

*Well, it turns out the albatross has two of them.*

Really?

*On its nose.*

Why?

*Well it needs to know how fast it is flying.*

Its air speed, you mean.

*Yes. It needs to know its air speed.*

So it has a couple of Pitot tubes on its nose! That’s amazing!

*One each side.*

OK. But how does a Pitot tube work?

*It has one open end.*

Facing forward?

*Yes.*

And?

*Air pushes in.*

When it’s flying.

*Yes. Air is pushed into the Pitot tube when the albatross is flying.*

O.K.

*And the pressure rises.*

Inside the tube.

*Yes.*

And the higher the airspeed, the more air gets pushed in.

*Yes, exactly.*

And the more air that’s pushed in, the higher the pressure in the tube, I suppose?

*That’s right.*

And the albatross measures this?

*Well, the Pitot tubes do, yes.*

So the albatross knows how fast it’s going?

*What its air speed is, anyway.*

And it needs to know this, I guess.

*Well, the Wandering Albatross flies a lot.*

Much more than most birds do.

*Anything up to 1,000 km a day.*

1,000 Km a day?

*As far as from London to Scotland and back.*

London to Scotland?

*And back.*

That’s a long way!

*It is.*

Every day?

*Most days.*

So it spends most of its time in the air?

*Yes. Gliding. Gliding all day long.*

So it needs to know its air speed.

*Exactly. All the time.*

There are lots of stories about the albatross.

*Well, they are very exciting birds.*

Sailors often see them hundreds of miles from land.

*Sailing the winds for ever and ever.*

To a sailor, that would be amazing.

*Quite spooky.*

Yes.

*Some sailors thought they were the souls of dead sailors.*

Well, they do look amazing.

*So they said they should not be harmed.*

Some sailors thought killing an albatross would bring bad luck.

*It was like killing a sailor.*

The soul of a sailor, anyway.

*But some didn’t say that at all.*

No!

*Some sailors liked to shoot albatross.*

Yes.

*If they could.*

To eat.

*Yes.*

Well, it was fresh meat.

*Not much of that at sea.*

No.

*And a big albatross weighs about 12 kilos.*

That would make a nice, big roast!

*Yes.*

I wonder what it tasted like?

*Might be a bit tough?*

All that flying…

*It’s the biggest bird living today.*

The biggest wingspan, anyway.

*Some birds are heavier.*

Well, yes.

*But not such a big wingspan.*

How big is it?

*About three and a half metres.*

From wingtip to wingtip.

*Yes.*

They don’t flap their wings when they fly.

*No, they don’t.*

Only when they try to get off the water.

*Yes.*

Sometimes they rest on the water.

*Yes. Sometimes. Out at sea.*

Not very often, though.

*No.*

Because it’s difficult for them to get into the air again.

*It’s a real struggle.*

Their wings are really for gliding.

*They are wonderful once they are in the air.*

But it’s a job getting there.

*It’s a funny thing to see an albatross taking off.*

It’s like watching a big plane.

*They put their wings out wide and run.*

Run like mad.

*Once they get speed up their wings lift them.*

But they have to run like mad to get speed up.

*They’re brilliant gliders.*

They hardly move their wings.

*They just glide.*

They glide on the wind.

*Brilliant.*

Must be, if they can fly 1,000 km in a day!

*Yes.*

And for days at a time.

*Yes.*

Why?

*How do you mean, “why”?*

Why do they fly such enormous distances?

*Food, I think.*

Oh.

*They don’t dive for fish.*

Not like some seagulls.

*No.*

So what do they eat?

*They look for floating stuff.*

Stuff floating on the surface?

*It’s often dead stuff.*

Dead stuff?

*Like dead squid.*

Dead squid?

*Yes.*

There can’t be that much dead squid floating about.

*That’s why they have to fly such long distances.*

Mmmmm …

*They have to take food back to the nest, too.*

I suppose they do.

*In the breeding season.*

Where do they live?

*Where’s home, you mean?*

Yes. Where’s the nest?

*It’s usually on a remote island.*

Way out to sea?

*Where it’s safe.*

Mmmm …

*The albatross mates for life, you know.*

Like swans!

*Yes.*

Swans mate for life, too.

*And the Wandering Albatross lives about 50 years.*

Really?

*But they only lay one egg a year.*

Only one egg?

*And not even every year.*

Why not?

*The chicks take a lot of looking after.*

Oh?

*For maybe 10 months.*

I suppose the chick has to be fully grown before it can fly.

*And it has to be able to fly well right from the start.*

Yes. And life is going to be hard.

*So a chick needs a good start.*

The nest must be a windy, cold place.

*So the chick has to be kept warm.*

And well fed.

*Mmmm...*

One parent stays with it all the time.

*Yes.*

Keeping it warm.

*They take turns.*

One flies out to sea.

*Looking for food.*

While the other stays home.

*Sitting on the egg.*

Until that hatches.

*Then sitting on the chick.*

Keeping it warm.

*Yes.*

It’s a shame they only lay one egg a year.

*Why?*

Because the albatross is at risk.

*At risk?*

Of extinction.

*Extinction?*

Yes.

*Why is that?*

Well, on some islands there are now rats.

*Rats?*

Yes. Rats off ships.

*And the albatross has no defence?*

No.

*Perhaps they’ve never met rats before?*

They never had to defend their nests before.

*So they don’t really know how?*

No.

*Rats will eat chicks.*

Yes. They will.

*What else is killing the albatross?*

Long line fishing.

*What’s that?*

Long fishing lines on the surface of the sea.

*With baited hooks?*

Yes.

*And the albatross pick up the bait?*

Yes. Then they get hooked.

*And then they’re caught.*

Mostly, they just drown, then.

*That’s a sad end for a bird like that.*

There may be only 25,000 left.

*In the world?*

Yes.

*Is there anything we can do?*

Well, some fishermen sink their long lines now.

*Does that help?*

It seems to.

*Maybe we could just feed them?*

They cover too much sea.

*They fly too far?*

Yes.

*But we can buy fish caught with sunk lines.*

Read the label, you mean?

*Yes. Sometimes that will tell us.*

If we read it!

*Well, we should.*

Every little helps.

*I suppose so.*

It would be a shame.

*What would?*

If they died out.

*Albatross?*

Yes.

*Lots of people really love them.*

There *is* something special about them.

*Something about their amazing gliding.*

The distances they fly.

*Alone over the enormous sea.*

Sailing on the wind, like a free spirit.

*Hundreds of miles from land.*

It’s almost as if those sailors were right.

*How do you mean?*

Maybe they really are the souls of dead sailors.

*Well…*

It’s almost as if they really are.

*Well, almost!*