KS3 Geography. Richard Hammond's wild weather

What is wind?

NARRATION: Wherever you live on the planet, weather shapes your world. Yet for most of us, how it works is a mystery. So, I'm going to strip weather back to basics - uncovering it's secrets in a series of brave, ambitious and sometimes just plain unlikely experiments. To show you weather like you've never seen it before.

RICHARD: What is wind? Sounds a simple question doesn't it? But how does a wind actually start? To find out I'm visiting a place said to have the worst weather in the world. This is Mount Washington in New Hampshire, USA. And it's perfect for the experiment I've got in mind.

TO CAMERA: Well, we are now at the summit. You're going to have to trust me cos you can't see much through there, but through the cloud, and the snow, and the howling winds, this is the top of Mount Washington.

[INDICATING LONG TUBE] Now, you might have been wondering what this was all about when we set off. I know some of the crew were. Well, what I've done in this device, hopefully, is I have caught some wind. There was nothing in it when we set off I just closed the valve - there is now wind in there.

I'm going to release it shortly, and what I'm hoping is that as the wind rushes out that I've caught in there it'll move these little filaments here so that we can actually see it. This all seemed like such a good idea when we came up with it. Got one go at this.. Right - here we go.

[RELEASES VALVE.] Did you hear that? And I saw it as well. That was wind - and it was, it's the basis of wind anyway. Because when this was down at the bottom of the mountain the air pressure around and inside this tube was higher than it is up here at the top. So, I shut the valve, captured that higher pressure air in there came up here opened the valve and the high-pressure air rushes out to the low pressure. [HISS.]

NARRATION: The height of Mount Washington is enough to create a pressure difference. And pressure differences of various kinds are what create winds.

How to use wind to forecast the weather

TO CAMERA: Right, here's how to amaze your friends.

First, stand with the wind at your back. Then you're looking for clouds. If those clouds are moving overhead, directly away from me, or directly towards you, or they're stationary, then the weather is going to stay broadly the same.

If they're moving from left to right, it's going to get worse. If they're moving from right to left, it's going to improve.

NARRATION: So... Right to left, better. Left to right, worse. Straight down the middle, stays the same. As long as you have your back to the wind.

TO CAMERA: Unless you're in the Southern Hemisphere, in which case you reverse that bit. Brilliant, isn't it?