

## **Capturing Sunrise**

**Andy Akinwolere:** It's early morning, 5am and usually I'd be tucked up in bed, all nice and warm but there is method to my madness.

I'm here with Pete to capture the perfect sunrise. In a few moments something spectacular is going to be happening and I'll be using this baby to take all of the pictures.

Astronomer Pete Lawrence has photographed plenty of magical sunrises and sunsets but today I've just got the one chance.

We need to know where the sun is coming up so I have the perfect tool for you to do that - a compass.

Well I know the sun rises in the east which is that way so what do we do from here?

**Pete Lawrence:** This time of year it's actually a little bit further to the south of east – about 9 degrees so we can use the compass to get it absolutely spot on and then just point the camera where we need to get it.

Just turn it around there so it's pointing in the right place.

**Andy Akinwolere:** Being by the sea, is that a great place to take this picture?

**Pete Lawrence:** It is because you've got a perfectly flat horizon and sometimes you get effects when the sky is really clear you get a fantastic effect when it looks as if the sun is boiling out of the sea.

**Andy Akinwolere:** People always tell me not to look directly into the sun so how are we going to do this?

**Pete Lawrence:** That's really good advice. You should never ever stare at the sun never look through a viewfinder of any instrument pointing at the sun as it's dangerous and you can damage your eyes.

All we're going to do is take the photos and look at the rear screen so we're not looking at the sun at all.

**Andy Akinwolere:** Sunrise is scheduled for 6.35am and it's now 6.30am so let's get started.

That looks good already. That is lovely, absolutely lovely. And this was what we'd been waiting for.

It's beautiful, that's priceless. The pictures we're getting are absolute classics. Look at that, honestly. Gorgeous isn't it? Beautiful.

Those reds on the cloud back there are absolutely beautiful with the reflection on the water as well.

That's really lovely isn't it? When the reflection comes down like that.

So why is it red?

**Pete Lawrence:** All of the light that's coming from the sun contains all of the colours, so they're all mixed together and they form what we call white light.

But when the light comes through the atmosphere, the blue out of that gets scattered all over the place, so it moves away from the sun basically in the sky.

So you can see the blue everywhere else – we've got this fantastic blue sky but the light which comes directly from the sun still retains all the reds.

All the blue light is scattered away so we're looking at the reds and the oranges just coming through and that's why we get that lovely colour.

**Andy Akinwolere:** It's a great effect, it really is.

**Pete Lawrence:** Yes it's a beautiful shot; it's a golden orange colour.