In the first scientific experiment to be conducted via the social messaging service, experts will investigate "remote viewing" - the psychic ability to identify distant locations. Members of the public will be asked to "tweet" their impressions of a randomly chosen spot in the UK visited by one of the researchers. Then they will vote for which of five photographs on a website shows where the visitor was standing. The trial will be repeated with visually different locations four times. If at the end of the experiment the votes correctly identify at least three targets, it will support the existence of extra-sensory perception. Study leader psychologist Professor Richard Wiseman, from the University of Hertfordshire, who specialises in investigating psychic phenomena, said: "Personally, I'm sceptical, but three hits would be against odds of one in 125, which would be quite impressive." He hopes as many as 10,000 people will take part in the research, being conducted in collaboration with New Scientist magazine.

Prof Wiseman will travel to each target location and send a message to thousands of participants to "tweet" their thoughts about his surroundings.

Twenty minutes after sending this message he will transmit another containing a website address on which participants can view photographs of the actual location and four decoys. They will then cast their votes.

"I have staged several mass participation studies over the years, but this is the first to use Twitter," said Prof Wiseman.

"The instant nature of tweets allows thousands of people to take part in real time, making it perfect for an extra-sensory perception experiment.

"If the effect does exist then having so many people participate will help detect it."

Prof Wiseman is not the first scientist to investigate remote viewing.

At the height of the Cold War in the 1970s, the CIA spent \$20 million (£12.5 million) conducting remote viewing experiments in a real-life case of the "X-files".

The "Stargate Project" was aimed at conducting "psychic spying" missions against the Soviet Union.

"The Russians were doing the same thing, and there was evidence from laboratory studies that suggested there might be something going on," said Prof Wiseman. "The CIA just thought it was worth a try and ran the programme for about 10 years."

Remote viewing has been linked to astral projection and telepathy, but no-one knows how it might work.

Unlike the CIA, Prof Wiseman will be looking for a group effect rather than individual ability.

This is a phenomenon known as "the wisdom of the crowds".

"If you have a jar full of jellybeans and you want to know many are in it, you get the most accurate estimate by averaging a number of different people's estimates," said Prof Wiseman.

The results of the experiment should be known on Friday.

Sumit Paul-Choudhury, online editor at New Scientist, said: "There have been mass participation experiments since the start of mass communication and this is the next step.

"If we find some sort of effect then we can get into speculating about how it works."

Anyone can take part in the experiment by visiting the site.