



Prediction and Testing - Teacher's Notes

Prediction and Testing

Scientists often make predictions about what they think will happen. They try to base these sensible scientific guesses on information they and other scientists already have. The important thing that follows this is that, where possible, these predictions are tested. Finding that an idea doesn't work is just as important as finding what does, particularly in medical science. We get better and better at predicting things as more information comes in and as technology improves. Students who have made "wrong" predictions can learn and make a better one next time.

Materials per group

- Thermometer
- Rough map of school or classroom

Method

1. Brainstorm to find student predictions of the hot and cold areas in the room and in the yard.
2. Students should state their predictions giving a reason why they chose this or these particular areas. E.g. I think that is a hot/cold area because
3. Board student predictions and reasons.
4. Select groups to take the temperature of specific areas reminding them to take air temperature not surface temperature. And not to hold the thermometer by the bulb.
5. Board their findings

Observations

Students may suggest that some areas are hotter because they are sunny, are near the heater or are protected from the wind.





Prediction and Testing - Teacher's Notes

Ask the students what the source or sources of this heat are? Sun, radiators, outlet fans from canteen kitchens.

Temperature outside each hour during one day

If you have sufficient thermometers and students remain with you all day then they will be able to take their own readings. If however this is not possible please use the data provided or use the information given daily on your weather app.

DAY Monday

Date 25/6/2016

Location West Perth

Predict which time of day will have the hottest temperature. Suggest during school time. If you live on the equator and in the middle of a time zone theoretically the hottest time would be about noon. If you live at the western edge of a time zone, like Perth, the heat of the day will be delayed. Heat build up is also modified by wind and cloud cover.

| TIME | 9am | 10am | 11am | 12am | 1pm | 2pm | 3pm |
|-------------------|-----|------|------|------|-----|-----|-----|
| Temperature in °C | 22 | 24 | 30 | 32 | 33 | 32 | 28 |

When was the hottest part of this day? 1pm

Using the information you have collected, predict when the hottest part of tomorrow will be. 1pm or there about.

Is there a regular pattern for temperature each day? The warmest time is between 11am and 3pm. (Between eleven and three stay under a

