

Using data-loggers in the primary classroom

Tasks

A staff development workshop on using digital technologies for a group of teachers

How noisy, How quiet

Activity

1. Make a noise!
2. Try the different sound making objects.
3. Watch the changes in the different display screens.



Questions

- What happens to the Changes screen when there is a loud noise?
- What happens to the Gauge when you make different sounds?
- What happens to the Dial when you make different sounds?
- Does the computer remember which the loudest sound was, or which the quietest sound was?
- Which display shows the changes best?
- What difference does distance make to the sound level?
- Does the sound sensor display a reading if you make a noise behind it?
- If you cover the sensor in fabric, does it make any difference, and if so by how much?



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Sunglasses

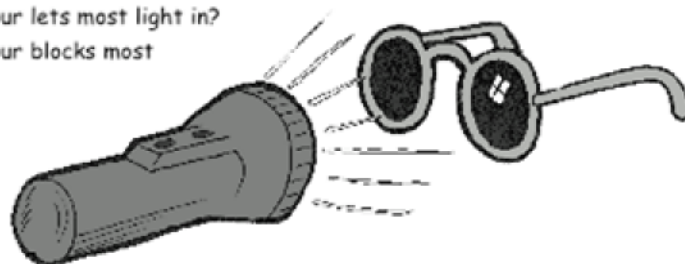
Activity

1. Before you start, make a prediction as to which of the sunglasses you think will block out the most light.
2. Set up a fair test for the sunglasses.
3. Click **Start** to begin.
4. Click in the graph area to take the first measurement.
5. Double click in the comment column of the table and type in a name for the sunglasses you have used.
6. Take a snapshot measurement of each sample.
7. When you have finished testing click on **Stop**.
8. Use **Values** to find out the difference between one sample and another.



Questions

- Was your prediction correct?
- Which sunglasses let the most light through?
- Are different sunglasses better for different activities e.g. sunbathing, walking, and driving?
- Which colour lets most light in?
- Which colour blocks most light out?



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Sunshine and clouds

Activity 1

1. Set up the activity so that a light source, e.g. torch, shines on the built-in Light sensor. (Use the **EASYSENSE Q's** meter screen display to check the light level).
2. Click on the **Start** icon to begin logging.
3. Pass the light coloured cloud shape slowly in front of the light source.
4. Use **Values** to find the light level while the cloud was in front of the sensor.



Questions

- How much light was blocked by the light coloured cloud?

Activity 2

1. Select the **Predict** feature by clicking with your right hand mouse button in the graph area. Draw what you think the graph will look like when the dark cloud shape is passed in front of the sensor.
2. Click the **Start** icon to begin logging.
3. Pass the dark cloud shape in front of the light source.



Questions

- How close was your prediction to the real reading?
- How much light was blocked by the dark cloud?

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Is it ever quiet?

Activity

1. To stop the recording, press the red button on **EASYSense Q**, press the green button to confirm and return to the main menu. (Q3 & 5 users will need to press the green button twice to return to the main menu).
2. Connect **EASYSense Q** to the computer and start the **EASYSense** program.
3. Click on Retrieve remote on the Home page. Select the most recent data set and click on Retrieve. Make sure there is a tick against sound, click on OK.
4. Save the data set.



Hint - In order to compare one day's results with another, remember to start a second recording at the same time as the first one.

Questions

- From your graph have you found out what you wanted to know?
- Is the school ever silent?
- When are we noisiest?
- Are we noisy at the same time every day? If we are, what are we doing at that time?
- When are we quietest?
- What were we doing when we were quiet?
- What have you found out from the graph?

