**Activity 2: Themes around calibration: Student support sheet**

Watch the video and answer the questions given below:

1. Describe what calibration is and explain why it is used. Use key words and phrases from the box below to help.

equipment design parameters reliability measurements

standardise meaningful results quality control

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1. Give the letters of the arguments below which explain why calibration is important in industry:

**A:** Allows quality-control requirements to be skipped when necessary

**B:** Improves the accuracy and reliability of results

**C:** Encourages companies to regularly spend money on new equipment

**D:** Improves the precision and fairness of results

**E:** Meeting legal/quality-control requirements

**F:** Allows workers to cut corners when performing tasks

**G:** Ensures equipment is clean in time for its next use

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1. Give examples of instruments that need to be calibrated:
2. Weekly:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Monthly:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Annually:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. Give three specific examples of when calibration is used.
6. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
8. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
9. Draw lines from the key word to its correct definition:

the closeness of agreement between a measured value and the true quantity value

the quantification of doubt in a measured value

precision

the closeness of agreement between measured values

accuracy

the difference between the measured value and the true value