

Science Department Guide to Marking and Feedback



Key stage 3 and 4	A-Level
<p>a) How often is work formally marked and what grades are given?</p> <p>Tests are given after the majority of units. These assessments are formally marked and are given marks reflective of the progress statements or at GSCE, Grades 1-9. This takes place typically 3 times per term.</p>	<p>a) How often is work formally marked and what grades are given?</p> <p>At least 5 times per term. Assessments are graded as A Level grading system A* → U.</p>
<p>b) How is feedback given to students after the marking of key pieces?</p> <p>Numerical marks are written on to tests, and annotations are added by the teacher which reflect the progression statements or GCSE grade descriptors.</p>	<p>b) How is feedback given to students after the marking of key pieces? (Include examples of pp slides or feedback sheets)</p> <p>Marks on test, annotations given and often a grade.</p>
<p>c) How are students guided in lessons to ensure they all complete quality feedback tasks?</p> <p>Students complete their corrections in green ink. More able students may support each other. The teacher will support those who need further scaffolding. There is often a PPT slide to help scaffold corrections and improvements.</p> <p>Students will complete a further challenge task to confirm they have understood the correction work. If a student got all or most of their assessment correct they will have an extension or challenge work to complete. Sometimes the further challenge or extension work may be set as homework or incorporated in the starter over the next few lessons.</p>	<p>c) How are students guided to ensure they all complete quality feedback tasks? Please give examples.</p> <p>Support resources include textbooks, internet, school VLE.</p> <p>Teachers will give feedback either verbally or in written format. This feedback may include modelling of answers and may be whole class, small groups or as individuals.</p> <p>Capable groups will support each other / teacher supports others when completing corrections.</p>
<p>d) What happens when a student misses an assessment or is absent for key learning?</p> <p>They complete missed work as soon as they can, often given notice on first day back. If the class is responding to feedback from the test on the day they return</p>	<p>d) What happens when a student misses an assessment or is absent for key learning?</p> <p>They complete as soon as they can, often given notice on first day back. If the class is responding to feedback from the test on the day they return then the</p>

then the student would typically be relocated (no penalty) to another with another class where they can undertake some revision, ideally they would gain some support from the teacher in the relocation classroom to help them prepare for the assessment.

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e) **How** do teachers **monitor** work quality, presentation and check for understanding **in between** key assessments?

Class checks for presentation (“You’ve done the diagram in pen, now re-do it in pencil”), homework’s, starters, questioning.

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Homework, in class assessments, starters, class discussion, questioning

f) How is **homework** checked and assessed?

Educake.co.uk will be the primary source of homework, students are given usernames and passwords through their teacher. Teachers will monitor progress of students through weekly online assessments.

Other work is typically Peer or Self Assessed.

f) How is homework checked and assessed?

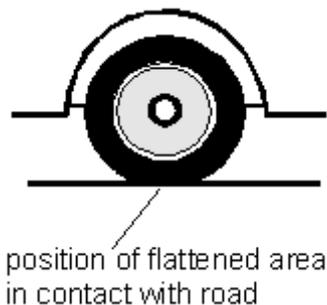
Homework is collected or checked on the due date.

It is assessed with a mixture of peer, self and teacher assessed.

DIRT Tasks (example from Year Forces and Pressure test) – Bespoke to Student and what they got wrong in the test.

Task 1 - Pressure

Alison has a car. The part of each tyre in contact with the road is flattened.
This is shown in the diagram.



- (a) When Alison gets into the car, the force on each tyre increases.
What happens to the area of tyre in contact with the road?

.....
.....

1 mark

- (b) There is a leak of air from one of the tyres, and the air pressure in the tyre falls. What happens to the area of the tyre in contact with the road?

.....
.....

1 mark

- (c) The weight of the car is 8400 N. Each tyre supports a weight of 2100 N. The pressure exerted by each tyre on the road is 20 N/cm². Calculate the area of each tyre in contact with the road.

.....
.....cm²

1 mark

Alison goes for a drive on three different days.

- (d) Write the missing values in the table.

day	distance travelled in km	time taken in hours	average speed in km/h
Monday	32	0.8	
Wednesday	8		16
Friday		2.0	70

3 marks

- (e) Explain why the calculated car speeds are averages.

.....
.....

1 mark

Maximum 7 marks

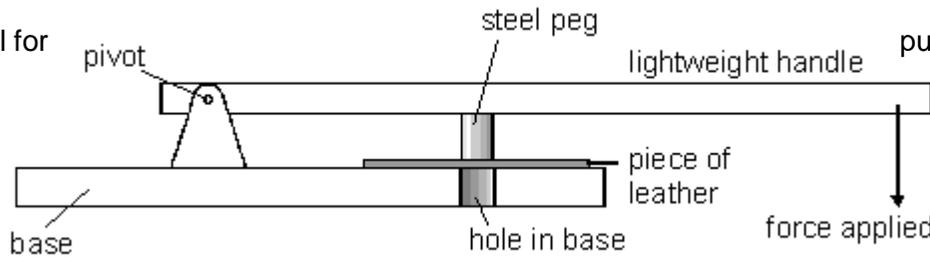
Task 2 - Moments

The diagram shows a simple tool for

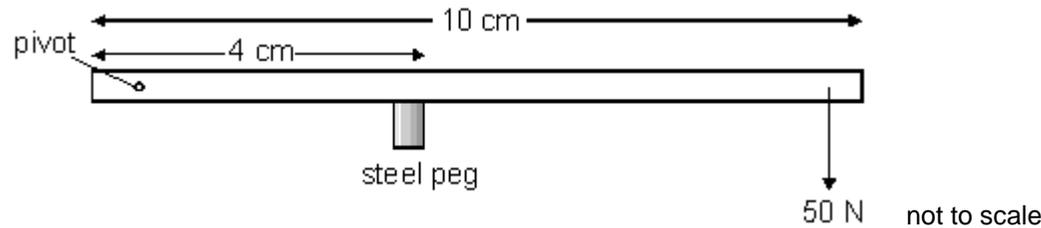
not to scale

When the handle is pressed the piece of leather. If the force through the leather, making a

The diagram below shows the force applied to the handle.



down, the steel peg presses down on is large enough, the peg punches hole.



- (a) Calculate the moment (turning effect) of the 50 N force applied to the handle. Give the units.

.....

2 marks

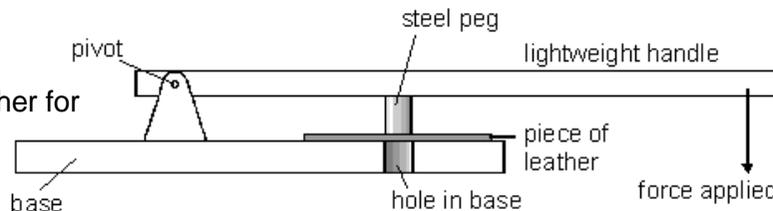
- (b) This moment makes the steel peg press down on the leather. Calculate the force with which the steel peg presses down on the leather.

..... **N**

1 mark

Task 3 - Pressure

A metal punch is used to make a hole in leather for



a belt. A steel peg presses down on the

- (i) The area of the end of the steel the steel peg on the leather? Give the units.

peg is 0.1 cm^2 . What is the pressure of

.....
.....

2 marks

(ii) The pressure is too small, and the punch does not go through the leather. What **two** things could you do to enable the steel peg to go through the leather?

.....
.....

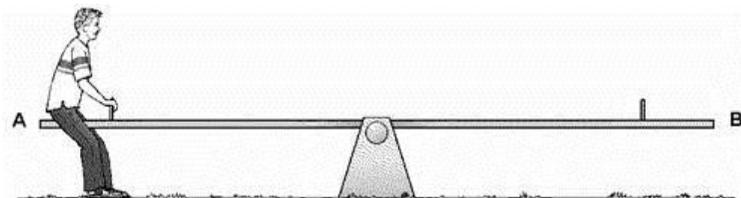
2 marks

Task 4 – See-Saw Problem

Five people take it in turns to sit on a see-saw. The table gives the weight of each person.

person	weight, in N		person	weight, in N
Jack	510		Maggy	540
Ellie	540		Andy	560
Rosie	490			

(a) Andy sits at one end, but there is nobody on the other end.



Andy sits on the see-saw. In which direction does his end of the see-saw move?

.....

1 mark

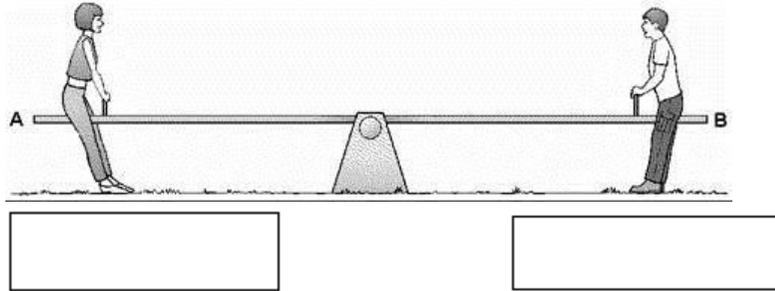
(b) Which **two** people in the table above could make the see-saw balance?

.....and.....

1 mark

Use information in the table to help you answer parts (c) and (d).

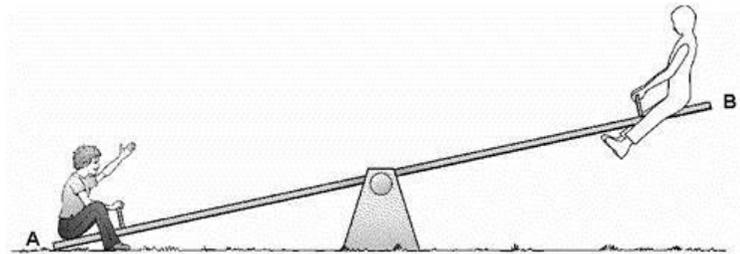
(c) Rosie sits on end A, and Jack sits on end B.



They lift their feet. What happens to each end of the see-saw?
Write **up** or **down** in the boxes under Rosie and Jack.

1 mark

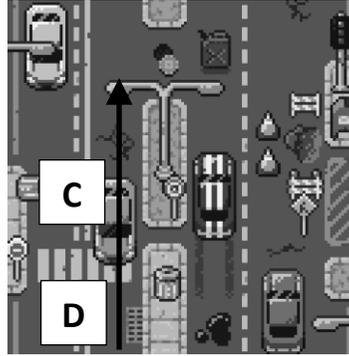
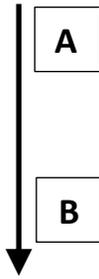
(d) Ellie sits on end A, and another of the group sits on end B. Ellie's end stays down.



Who could be on end B?

1 mark
Maximum 4 marks

Task 5 – Relative Speed



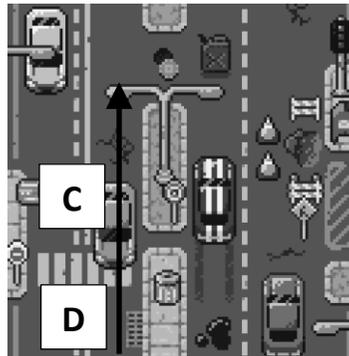
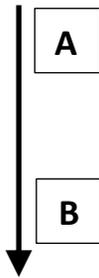
Cars A and B are travelling down the page. Cars C and D are travelling up the page.

- a) If Car A is travelling at 30 miles per hour and car B is travelling at 22 miles per hour. What is Car A's relative speed compared to Car B?

- b) If Car C is travelling at 32 miles per hour and car D is travelling at 28 miles per hour. What is Car C's relative speed compared to Car D?

- c) People in Car A look across the road to Car C. What is Car C's relative speed compared to Car A?

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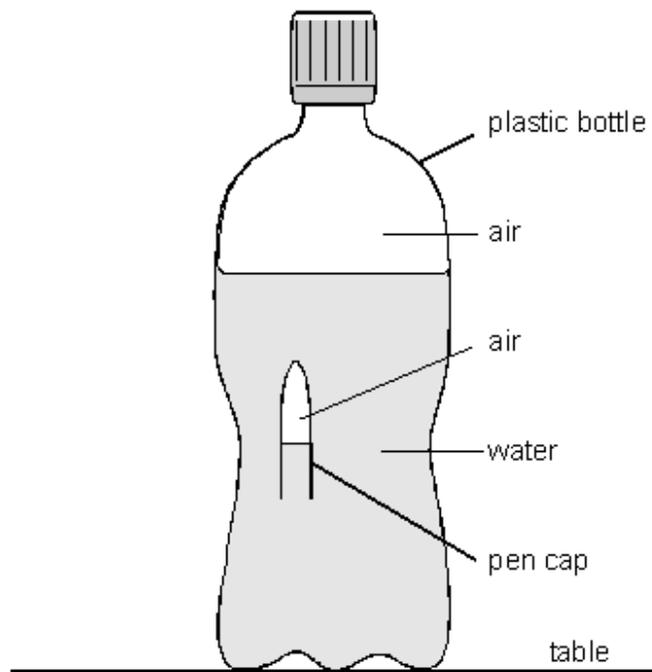
f) People in Car A look across the road to Car C. What is Car C's relative speed compared to Car A?

Task 5 – Extra Challenge! Pressure in Liquids & Gases

A pen cap floats in a plastic lemonade bottle three-quarters full of water.

If you squeeze the bottle the pen cap sinks to the bottom.

If you then let go of the bottle, the pen cap floats to the surface.



(a) When the bottle is squeezed what, if anything, happens to:

(i) the distance between the air molecules inside the bottle?

.....

1 mark

(ii) the distance between the water molecules inside the bottle?

.....

1 mark

(iii) the pressure of the air trapped inside the pen cap?

.....

1 mark

(iv) the volume of the air trapped inside the pen cap?

.....

1 mark

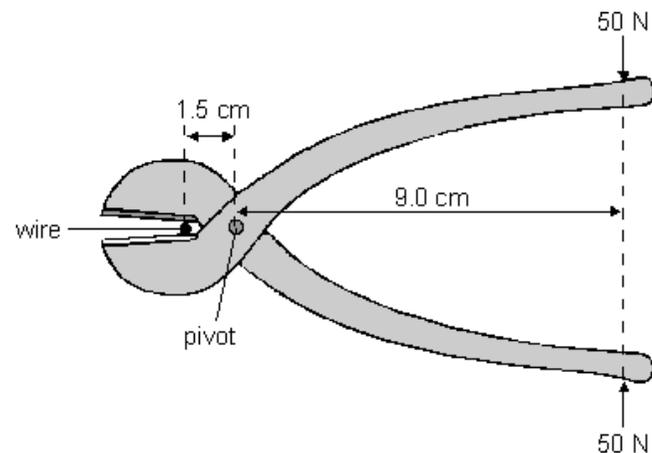
(b) Explain why the pen cap sinks when you squeeze the bottle.

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.....
.....
.....

2 marks
Maximum 6 marks

Task 6 – Extra Challenge! Wire Cutters

(a) James is cutting a piece of wire with a pair of wire cutters. He exerts a force of 50N on each of the handles.



(i) What is the turning moment about the pivot, on **each** handle? Give the unit.

.....
.....

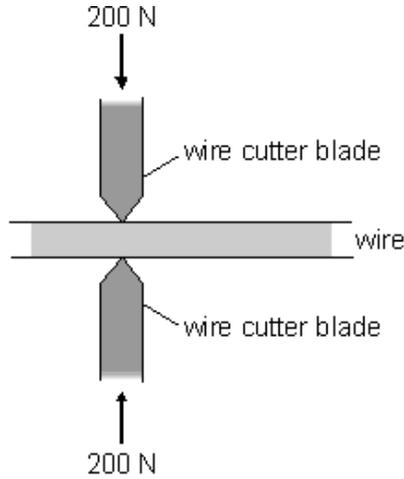
2 marks

(ii) What force is applied, by **each** blade, on the wire?

.....
..... N

1 mark

(b) Stephanie uses the same pair of wire cutters. The diagram below is an end-on view of the blades as they begin to cut the wire.



Stephanie exerts a force of 200 N on the wire with each blade. The area of contact of each blade on the wire is 0.0005 cm².

(i) What is the pressure of **each** blade on the wire? Give the unit.

.....
.....
..... 2 marks

(ii) As the blades sink deeper into the wire, the pressure of the blades on the wire decreases. Explain why the pressure on the wire decreases.

.....
.....

1 mark

Maximum 6