

Isaac Physics Teacher CPD

Teaching 11-14 Physics with isaacphysics.org



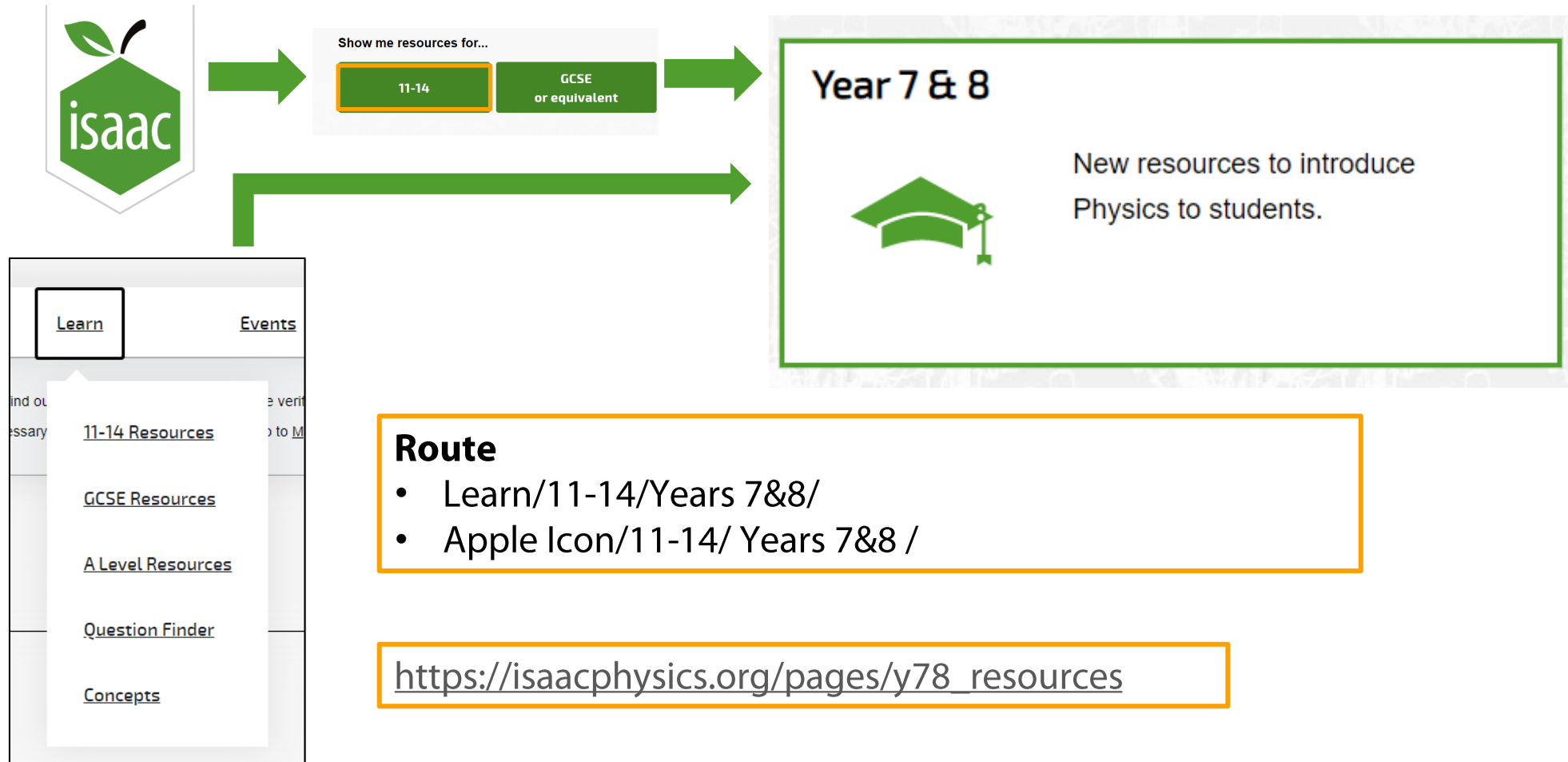
This session's objectives:

- › Using the Menu to find 11-14 resources
- › Using the Question Finder to find 11-14 questions and extension material
- › Using the Year 7 & 8 lessons, homework and practical material
- › Finding support for teachers to teach physics topics confidently
- › Accessing Year 9 lessons, homework and the Step-Up to GCSE book
- › Setting Year 9 summative tests
- › Using spreadsheets for displaying results



Years 7 and 8: Resources

- › Follow either path to access the new resources for years 7&8:



Years 7 and 8: Resources

- › Resources are split into concepts and experiments

Concepts

Resources for Years 7 & 8



Distance - Time Graphs



Learn about distance - time graphs.

Calculating Speed



Learn how to calculate speed.

Acceleration



Learn about acceleration.

Forces



Learn about forces.

Weight



Learn about weight in physics.

Force and Motion



Learn how force and motion are linked.

Energy Stores



Learn about energy stores.

Work Done



Learn about mechanical work and energy.

Force and Acceleration



Learn how force and acceleration are linked.

Experiments

Stretching Sweets

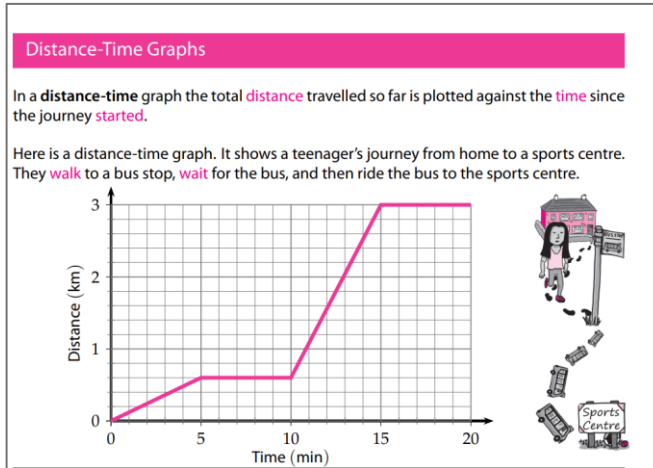


Investigate the stretching of sweets.

Experiments



Years 7 and 8: Resources



Distance Time Graphs Practice



Identifying Motion on a Distance-Time Graph
Physics > Mechanics

Year 7&8
P P P >

Class Resources

[Online class notes \(cloze text\)](#)

[Online class questions](#)

[Download class material \(pdf\) - full version](#)

[Download class material \(pdf\) - cloze text](#)

Homework Resources

[Online homework questions](#)

[Download Homework material \(pdf\) - full version](#)

[Download Homework material \(pdf\) - cloze text](#)

Teacher resources

Teacher Guidance notes are on the questions are available, along with suggestions for introducing the topic and other conceptual and pedagogical information.

[Distance - Time Graphs Teacher guidance notes](#)

Teacher Quarter

The Teacher Quarters are 15-minute video-based CPD sessions giving you a quick introduction to the concepts and content of each lesson. These are primarily intended for teachers new to teaching physics.

Each Teacher Quarter is made up of

- an introductory video
- a selection of questions to practise the idea
- a video which reviews those questions and how they might be tackled in class

[Introductory Video](#)

Click on a topic and access...

- **Class resources**
Notes and questions in full and cloze text form.
- **Homework resources**
- **Teacher resources**
Teacher guidance notes.
- **Teacher Quarter**
15-minute CPD sessions giving you a quick introduction to the concepts and content of each lesson.



Question Finder

Use the Question Finder to create
gameboards

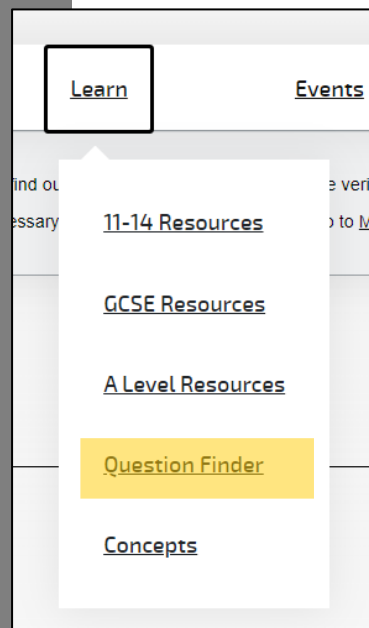
Route

- Learn/Question finder

Help Video



https://youtu.be/9docn_H8hh4



Topics:

Click these buttons to choose your question gameboard

I am interested in stage... ?

1

I would like questions for... ?

Practice 3

Challenge

Topics: 2

[Scroll to questions...](#)

1 Use the dropdown to select a stage (GCSE, A Level, Further A, University)

3 Select difficulty levels.
Practice: directly apply 1 idea
Challenge: Apply multiple ideas, use creativity

2 Select a subject, field and topic.

Years 7 and 8: Experiments

- › Experiment pages available, including:
 - Background questions
 - Equipment & method
 - Set-up videos
 - Instructions on data processing
 - › Including excel spreadsheet to fill in
 - Pictures where data could be read from
 - Questions on calculations & conclusion

Example link:

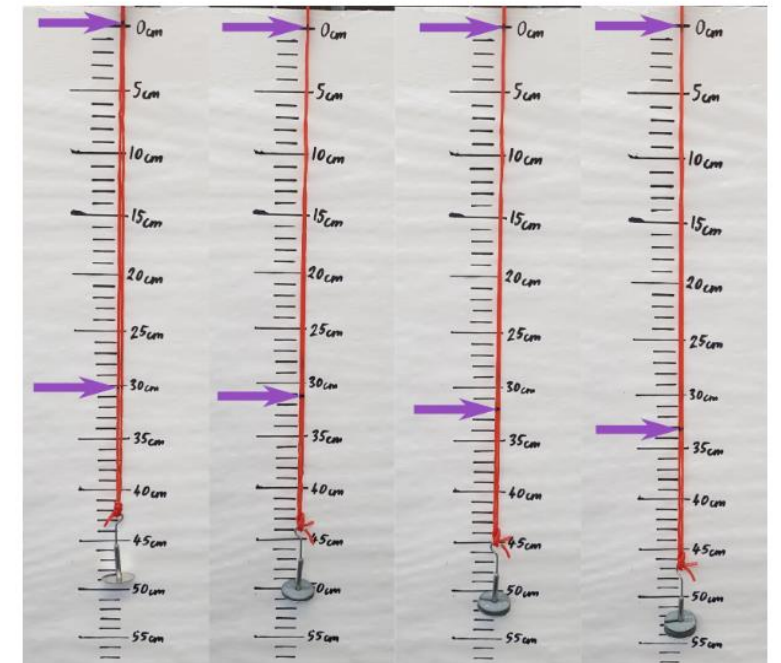
https://isaacphysics.org/questions/itsp_exp_sweets?stage=all

Part F No data?

Use the pictures below to make your measurements for the length of the sweets when different masses are applied and fill in your data in this [Excel spreadsheet](#).

The photographs in [Figure 5](#) shows 2 strawberry laces against a scale with 1 cm markings. Masses have been added 10 g at a time.

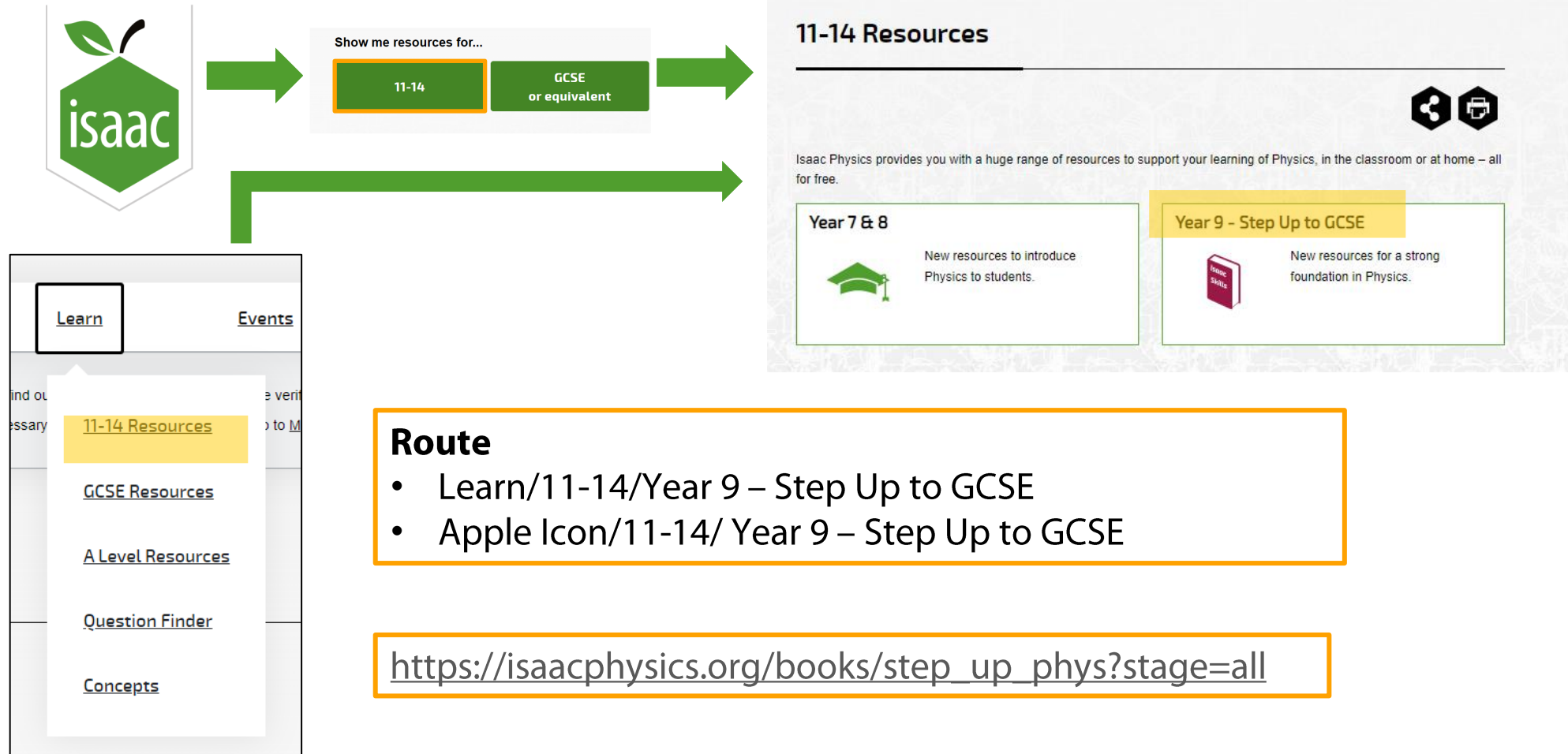
The photographs in [Figure 6](#) shows a peach against a scale with 1 cm markings. Masses have been added 100 g at a time.





Step Up to GCSE Physics

› Book available for Year 9 students





Step Up to GCSE Physics

- › Book available for Year 9 students
 - The chapters are available online
 - There is a **question board** for each section. It is possible to assign this to a group (info on group creation and management in later slides)
 - **Quick questions** available

Force and Motion

1

Displacement

[View board](#) | [Assign](#)

1Q

Displacement Quick

[View board](#) | [Assign](#)



CLOSE

1. Displacement

Manage assignment of groups to the selected gameboard

Group(s):

trial x

Schedule an assignment start date (optional)

x

Due date reminder (optional)

x

Notes (optional):

0/500 characters

Assign to group

Board currently assigned to:

No groups.

Pending assignments: ?

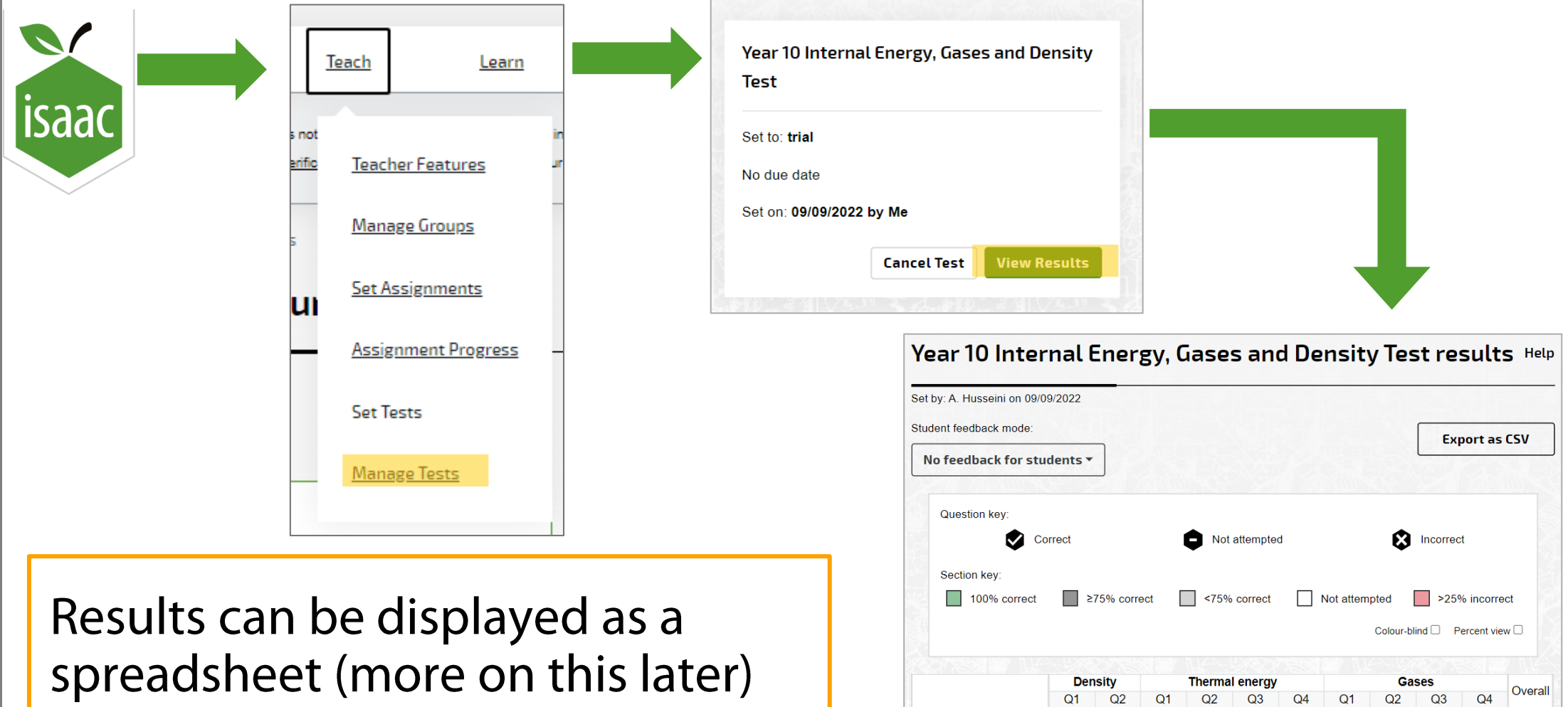
No groups.

Close



Manage Tests

- › You can view the results of each test
- › Teach/Manage Tests/View Results



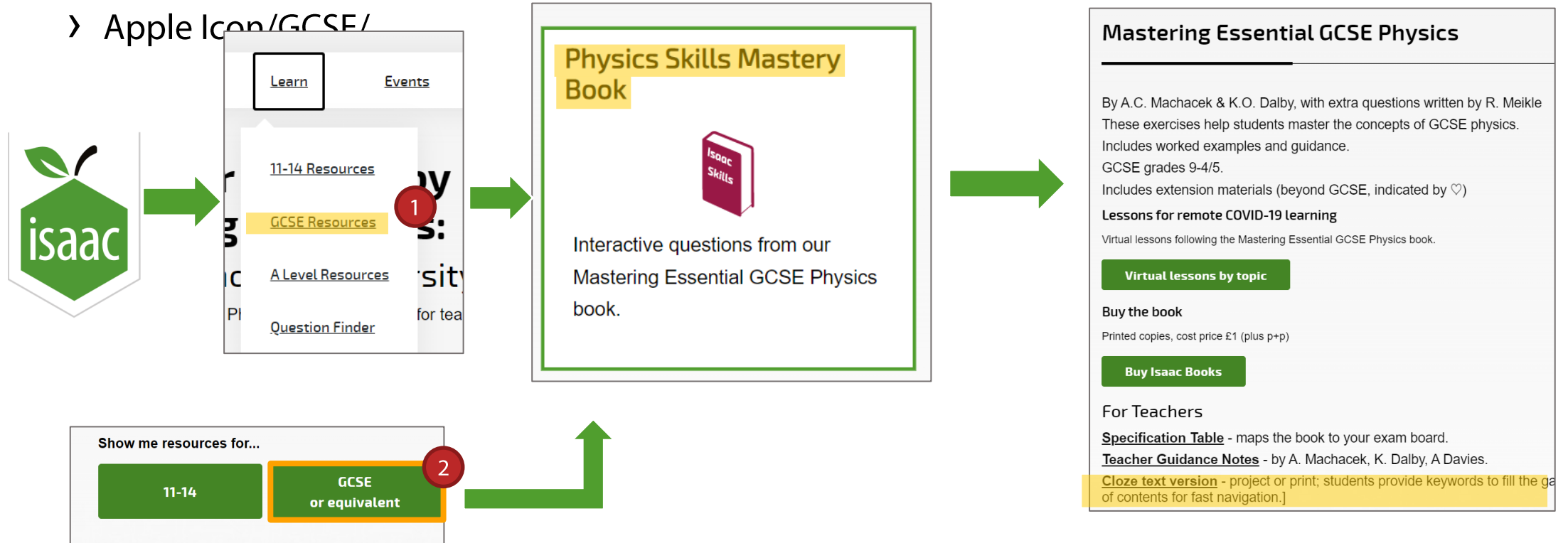


Cloze text for lessons and revision

Physics Skills Mastery Book

Routes:

- › Learn/GCSE Resources/Physics skills mastery/cloze text version
- › Apple Icon/GCSE/

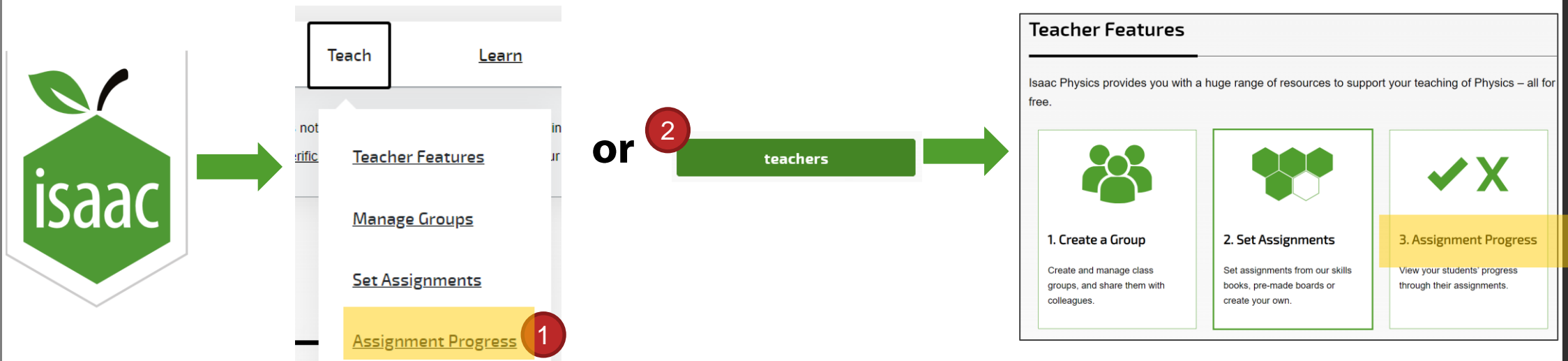


- › https://cdn.isaacphysics.org/isaac/books/isaac_gcse_physics_book_teacher_version.pdf
- › Gapped text for GCSE book: good for cover lessons, EAL students and students with SpLD (dyslexia)

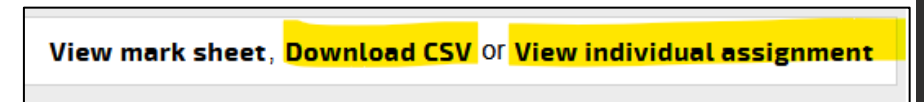


Use spreadsheets to display results

- › Apple/menu/assignment progress or Teach: Teacher Features/download group csv (paste into your spreadsheet)



- › Or click down arrow for individual assignment class results





Use spreadsheets for displaying results

100% correct $\geq 75\%$ correct $< 75\%$ correct Not attempted $> 25\%$ incorrect

Colour-blind ☐ Percent view ☐

100% correct $\geq 75\%$ correct $< 75\%$ correct Not attempted $> 25\%$ incorrect

Colour-blind ☒ Percent view ☐

												Download CSV	
2 of 2 students have completed the gameboard <u>A Level Pot-Pourri</u> correctly.													
Question: Sketching graphs of sin and cos squared													
▲▼	100%	▲▼	100%	100%	100%	100%	100%	100%	100%	100%	100%	Total Parts ▲▼	Total Qs ▲▼
	4/4		7/7	1/1	13/13	1/1	2/2	2/2	1/1	4/4	2/2	37/37	10/10
	4/4		7/7	1/1	13/13	1/1	2/2	2/2	1/1	3/4	2/2	36/37	10/10
▲▼	100%	▲▼	100%	100%	100%	100%	100%	100%	100%	100%	100%	Total Parts ▲▼	Total Qs ▲▼



Thank you for attending this CPD!

- › Need support?
- › Select from our comprehensive [help videos](#) (Menu>Help>How-to Videos)
- › <https://isaacphysics.org/contact> anyone able to help will pick this up
- › [ingrid@isaacphysics.org/](mailto:ingrid@isaacphysics.org) goes to Teacher Manager only
- › Join our [Isaac Physics WhatsApp community](#)
- › Find more free Isaac Physics CPD:
<https://isaacphysics.org/events> or
<https://www.talkphysics.org/events/>