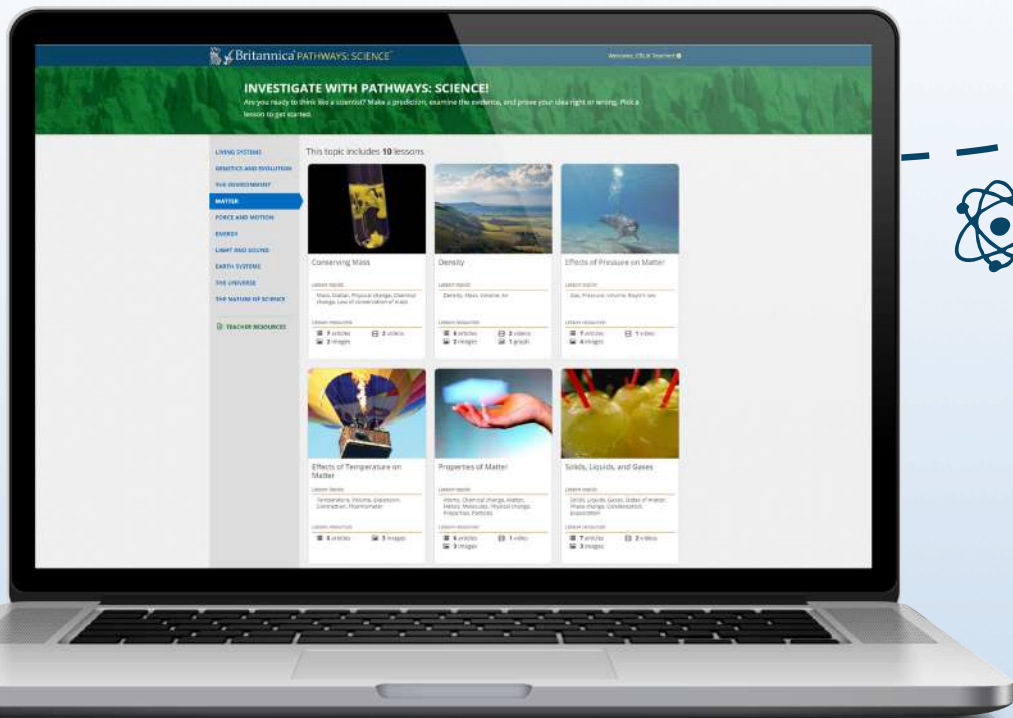




Guided Tour

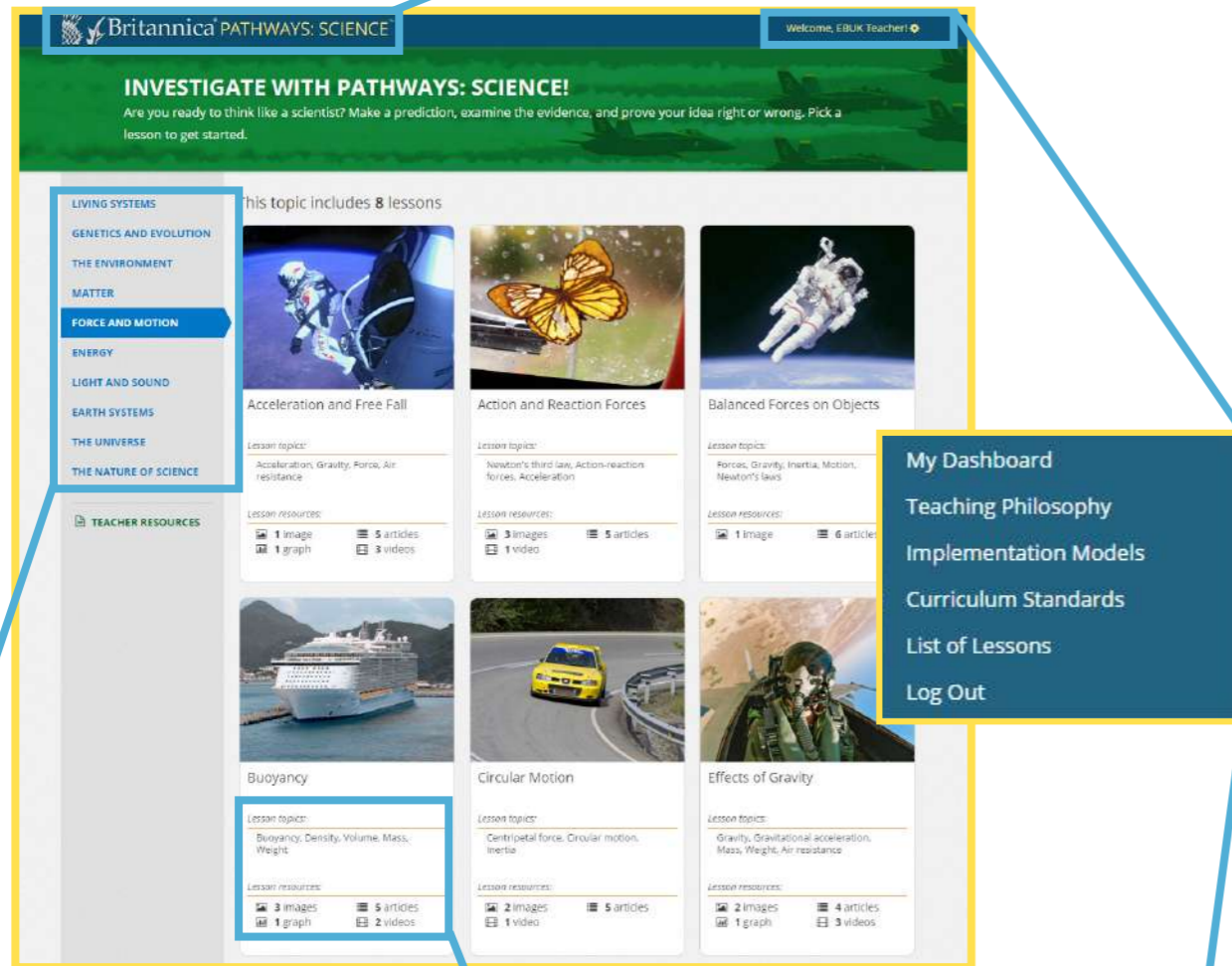
Your guide to getting started with
Britannica Pathways: Science



$$a^2 - b^2 = (a+b)(a-b)$$



Homepage



Britannica Pathways: Science button – this button appears at the top of every page; clicking it will bring you back to the Landing Page so that you can start a new lesson.

My Dashboard
Teaching Philosophy
Implementation Models
Curriculum Standards
List of Lessons
Log Out

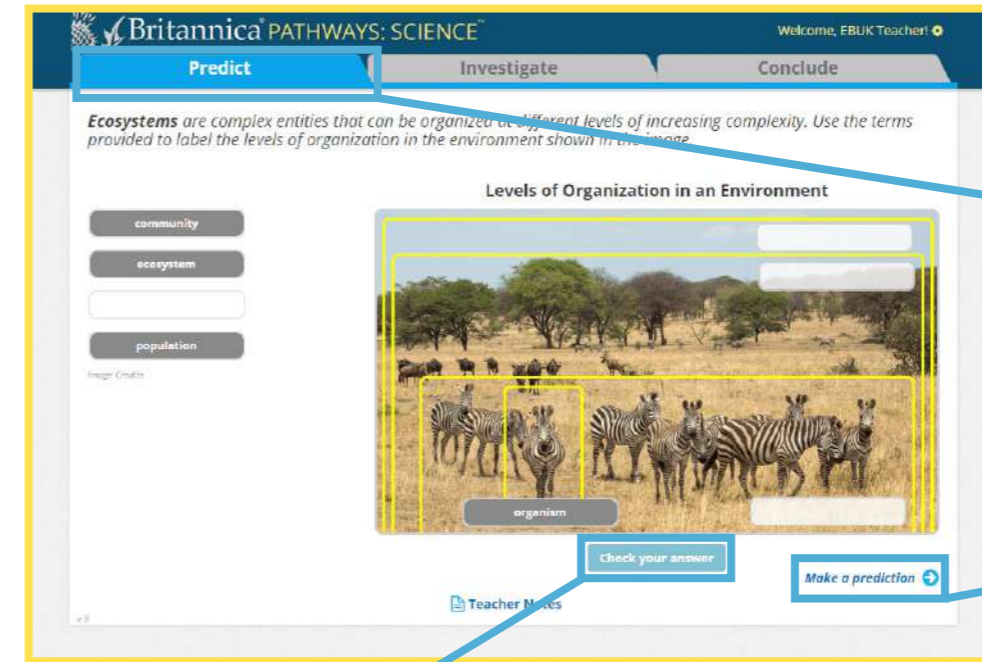
Choose a topic to see the lessons within. There are 100 science lessons across 10 topics.

A lesson overview shows you what content is inside and what scientific concepts are covered.

From here teachers can access their classes and assign lessons, as well as review Pathways' philosophy, implementation and curriculum standards. Students will be able to see their assigned lessons.

Lesson page - Predict

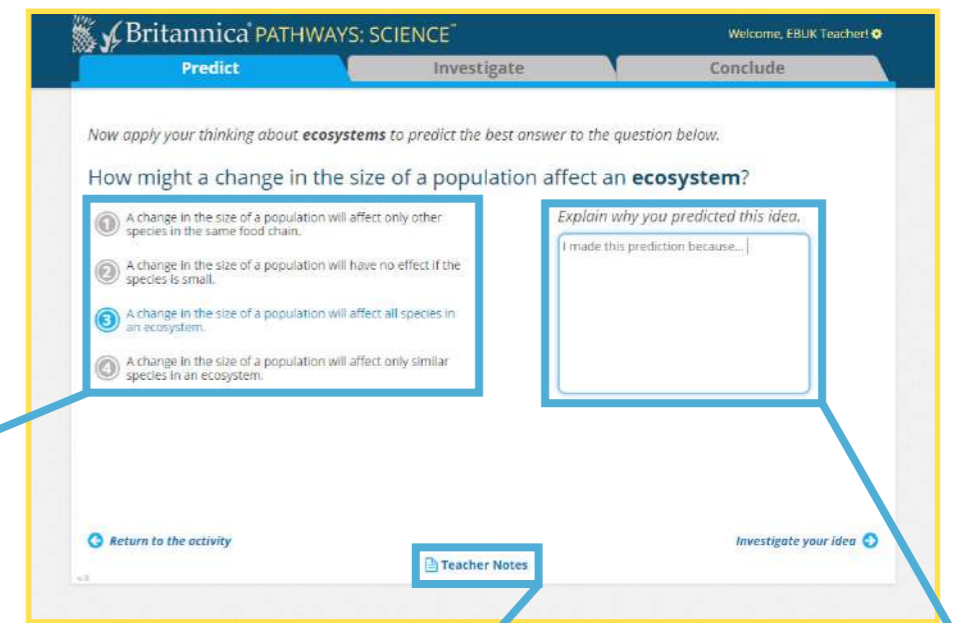
Each lesson is split into three steps: Predict, Investigate, and Conclude.



Each lesson starts with an interactive activity to assess students' prior knowledge.

This arrow will appear at the bottom of every page to progress the lesson.

Students can check their work and all answers are recorded for teachers to review.



First students must choose the hypothesis or statement that most closely aligns with their own views and knowledge.

When logged in as a teacher, quickly access further information about this lesson, including printable worksheets.

Students must support their choice with an explanation.

Lesson page - Investigate

Students look for evidence to support or contradict their prediction using Britannica's rich collection of resources.

Students should look here if they need help getting started.

These buttons allow students to listen to the text with Britannica's Read Aloud feature and change the size of the text.

Britannica prompts students with questions that help them think about the information in the resource.

QUESTION How might a change in the size of a population affect an **ecosystem**?

MY IDEA A change in the size of a population will affect all species in an ecosystem.

Recommended Resources

- Importance of predators (viewed)
- Ecological Niches (Not viewed)
- Ecosystem Overview (Not viewed)
- Biodiversity (Notes taken)
- Effect of Top Predator Removal (Not viewed)
- Trophic Cascade (Notes taken)
- Tide Pool Community (Not viewed)

Your notes from this resource:

How is biodiversity generally measured?

MY NOTE A high level of biodiversity, or biological diversity, is generally the sign of a healthy well-functioning natural community. Biodiversity is often measured as...

What is one way in which an ecosystem might benefit from having a diverse community?

MY NOTE higher biodiversity tend to be more resistant to drought compared with grasslands with low diversity

What information in this article relates to your idea?

MY NOTE Low biodiversity is a characteristic of artificial "communities," such as croplands and wide expanses of lawn.

Finish your investigation

Review articles, images, videos, graphs and diagrams to find information to help students decide if their hypothesis is supported or contradicted.

This will lead students to a check-point quiz with 3 questions to check their understanding before they draw a conclusion.

QUESTION How might a change in the size of a population affect an **ecosystem**?

MY IDEA A change in the size of a population will affect all species in an ecosystem.

Tide Pool Community

Pick any question to start!

- What is the top predator in this tide-pool community?
- How did the experimental removal of the top predator in this community affect other populations?
- What information in this image relates to your idea?

double-click dictionary:

tide noun \ˈtiːd/

- a space of time : period
- a fit or opportune time : opportunity
- an ecclesiastical anniversary or festival

Every resource has the 'double-click dictionary'. Double click on any word to see its definition – a handy tool to help build confidence for students with different English language levels.

After answering the question, students need to decide if their idea is supported or contradicted based on the information they have discovered.

Lesson page – Conclude

QUESTION How might a change in the size of a population affect an ecosystem?

MY IDEA A change in the size of a population will affect all species in an ecosystem.

Here are the notes you took while investigating your idea. If you want to change your mind about whether a note supports or contradicts your idea, click the icon to switch it.

3 support 0 contradict 2 not sure

Resource Name	Question	Notes	Supports or Contradicts?
Tide Pool Community	What is the top predator in this tide pool community?	The oohie sea stars are the top predators in many tide-pool ecosystems, feeding on mussels and other invertebrates.	?
Biodiversity	What information in this article relates to your idea?	Low biodiversity is a characteristic of artificial "communities," such as croplands and wide expanses of lawn.	?
Trophic Cascade	What causes a trophic cascade to occur?	A trophic cascade is an ecological phenomenon triggered by the addition or removal of top predators in a food chain. This often results in major changes in ecosystem structure.	✓
Biodiversity	What is one way in which an ecosystem might benefit from having a diverse community?	Higher biodiversity tend to be more resistant to drought compared with grasslands with low diversity.	✓
Biodiversity	How is biodiversity generally measured?	A high level of biodiversity, or biological diversity, is generally the sign of a healthy well-functioning natural community. Biodiversity is often measured as the number of species within a given area.	✓

Teacher Notes Draw a conclusion

Students can review their notes and analyse their research before drawing their conclusion about their research.

See a snap shot of supporting and contradicting information a student found during their investigation.

QUESTION How might a change in the size of a population affect an ecosystem?

CORRECT IDEA A change in the size of a population will affect all species in an ecosystem.

This idea is correct because...
An ecosystem is based on a community of organisms that are deeply interconnected. From the largest to the smallest members, each one has a niche—a unique role to play within the ecosystem. Any change to a population in an ecosystem will affect the balance between all its members to some extent.

Select an idea to see why it is incorrect.

- A change in the size of a population will affect only other species in the same food chain.
- A change in the size of a population will have no effect if the species is small.
- A change in the size of a population will affect only similar species in an ecosystem.

See these resources for more information:

- The Importance of Predators (Image)
- Biological Communities (Article)
- Phytoplankton (Video)

Teacher Notes Test your new knowledge!

See an explanation of the research-supported idea. If a student has chosen an unsupported idea, this will be explained too.

If a student needs to review research, for instance if they have chosen an incorrect answer or they are still unsure about the topic, Britannica suggests resources for them.

Click on any other idea to see an explanation of why it is unsupported.

Students now decide if their idea is backed by their research. If they feel it lacks evidence and they choose 'incorrect', they will be prompted to select a new idea that they feel is better supported.

On the basis of your investigation, your idea is: Correct Incorrect

Explain your final conclusion.

On the basis of my evidence, I drew this conclusion because...

Teacher Notes Find out which idea is correct

Students must support their selection with an explanation.

Teacher area page

Here you can review teaching philosophy, implementation models and curriculum standards.

My Dashboard

EBUK Teacher | brituk2 | Edit Profile | Browse Lessons

View Teacher Resources

Manage Classes and Rosters

Manage Lessons

EBUK Class Science 7C Science 7F Science 7G Science 8B Science 8C More Classes...

Seeing at Night View/Print Class Response Overview Download Student Progress Report

First Name	Last Name	Username	Status	Last Edit	Actions
EBUK	Teacher	brituk2	In Progress	1/26/2016 11:20 am	View/Print Restart Lesson

Reset Dashboard

See class progress for all assigned lessons, as well as download individual student progress reports. You can also view and print class response overviews to help you identify gaps in knowledge and other student trends.

Contact us now for a free
demonstration in your
school today!

 Britannica® PATHWAYS: SCIENCE™