

The Butterfly Effect

Biodiversity

Age	We are learning	Resources
5-6	Matching animals to their homes.	Digital Matching Sheet.
6-7	Habitat musical chairs.	In school: Chairs (start with one less than the number of pupils). At home: 10 toys and 9 containers/items to put them in/on (cups/bowls/spoons etc).
7-8	Creating a bug hotel and bird feeder.	Bird Feeder and Bug Hotel Instructions.
8-9	Creating a paper food chains.	Strips of recycled paper, glue and coloured pens/pencils, wildflower seeds.
9-10	Ecosystem Jenga.	Jenga and/or Online Jenga .
10-11	Writing a story about if one animal took over the world.	Computer OR recycled paper and a pencil.
11-12	Researching the rainforest as a complex ecosystem.	Deforestation Facts Sheet and a computer.

Teachers Notes:



Biodiversity

5-6

6-7

7-8

8-9

9-10

10-11

11-12

We are learning

About the types of homes animals live in and how they can be different for different animals.

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We can now...

Explain some of the different homes that animals live in and what makes a good home for that animal.

Activity

Class discussion around “home”. What type of home do we live in? Are all our homes the same? What do you need in a home? Can you think of any homes that animals have? What makes a good home for each animal? Digital matching task. Matching animals to the type of place they like to live.

Digital / At Home Version

Either play the game in the same way OR draw a home for each animal on the list.

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Additional Challenge

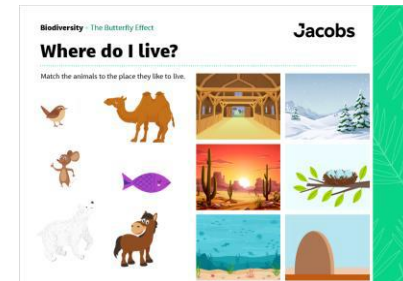
Research some other animals and their homes.

Additional Support

Teacher completes a couple of the answers in advance.

Resources

Digital Matching Sheet. (Can be completed digitally or on the board)



Suggested Follow-On Activities

Explore different animal's homes using an online search engine. Which animal makes the most unusual home? Can you draw it?

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Biodiversity

5-6

6-7

7-8

8-9

9-10

10-11

11-12

We are learning

How, as humans use more and more land for themselves, animals are left with nowhere to live.

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We can now...

Explain why animals need places to live, just like us.

Activity

Class discussion around home, why we need a home and some of the homes animals have. Introduce the word 'habitat' and explain that this is what we call an animal's home. Students play "musical chairs". The teacher explains that the chairs represents the habitat of different species and the children are the animals. As the game goes on, and chairs are removed, gradually there are fewer and fewer animals left with somewhere to live. In the first round of the game the children are orangutangs and the chairs are trees. In the second, the children are dolphins, and the chairs are clean water. In the final round the children are elephants, and the chairs are land without people living on it.

Digital / At Home Version

Play the game in the same way with siblings OR with toys representing the children and cushions, bowls or cups representing the chairs. Each time the music stops one item is removed and the next round there is nowhere for the toy to go.

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Additional Challenge

If playing at home, try to find a suitable 'home' for each animal based on size/shape etc. When that specific container is removed then that particular toy (animal) must be removed too. This will introduce the idea of varying species needing different habitats.

Additional Support

Children work in pairs to complete the activity.

Resources

In school: Chairs (start with one less than the number of pupils).

At Home: 10 toys and 9 containers/items to put them in/on (cups/bowls/spoons etc).

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Suggested Follow-On Activities

Draw your perfect home. What would it have in it? Where would it be? Who would live there with you?
Top Tip: Share your pictures using the hashtag #STEAMatJacobs.

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5-6

6-7

7-8

8-9

9-10

10-11

11-12

We are learning

How to create habitats for local wildlife.

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We can now...

Explain where some local animals live, why their habitats are important and how to create a habitat for one type of living thing.



Activity

Class discussion around the importance of having a place to live and how this is important for all living things, not just humans. Remind the children that we call the homes and places that animals live 'habitats' and explain that, when lots of different living things are able to live in the same area it is called 'Biodiversity'. Children then discuss some of the ways they could make their own school playground, gardens or local areas a better place for animals to live. Examples include making a bird feeder, building a bug hotel or plant wildflowers. Create a bird feeder or bug hotel by following the instructions on the Activity Sheet.

Share online using the hashtag #STEAMatJacobs.

Digital / At Home Version

Complete the same activity but select habitat to create based on the available resources and local wildlife. For example, planting flowers for bees.

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Additional Challenge

Keep a record of if/when the habitat is used by local wildlife.

Additional Support

Additional adult support with construction.

Resources

Bird Feeder and Bug Hotel Instructions. (Can be displayed on the board)



Suggested Follow-On Activities

Draw a picture of all the different living things you can think of that live in your local area.
Top Tip: Share your pictures using the hashtag #STEAMatJacobs.

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5-6

6-7

7-8

8-9

9-10

10-11

11-12

We are learning

What a food chain is and how this becomes a food web.

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We can now...

Explain what a food chain and web are and give examples of each.



Activity

Class discussion around food chains. Can the children name some specific examples (for example: corn, mouse, cat). Create a paper food chain using strips of recycled paper with a picture of each animal drawn on the strip of paper. Now, discuss food webs; these are made up of multiple food chains put together. Can the pupils add additional links to their chains that include other animals, creating a food web.

Digital / At Home Version

Play the same game in your house and with the food chain or web written on recycled paper.

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Additional Challenge

Have a competition to see who can create the most complicated food web with the most links!

Additional Support

Allow the children to work in pairs and/or research some examples of food chains online.

Resources

Strips of recycled paper, glue and coloured pens/pencils, wildflower seeds.

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Suggested Follow-On Activities

Re-write the song 'There was an Old Lady who Swallowed a Fly' to include a real food chain.

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5-6

6-7

7-8

8-9

9-10

10-11

11-12

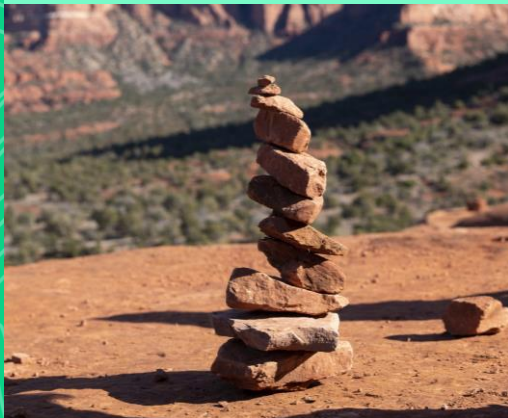
We are learning

That an ecosystem is fragile.

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We can now...

Explain how an ecosystem depends on every element within it.



The Butterfly Effect

Activity

Remind the class about food chains and webs. What information do they tell us? The relationship between several food webs is called an 'Ecosystem'. An ecosystem relies on all elements within it in order to function. Play the game 'Jenga', or, if this is not available play the online version. Each of the bricks in the game represents one living thing in an ecosystem. As the bricks are removed the ecosystem becomes increasingly fragile and, while it won't fall immediately, it will fall eventually. This, as the game shows, is very damaging.

Digital / At Home Version

Complete the activity in the same way. Either play the game from home or play a virtual game of Jenga.

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Additional Challenge

Give the pupils additional rules: One player is a worm, one a robin and one a hawk. The worm can only remove bricks on the right-hand side, the robin can only remove middle bricks and the hawk can only remove bricks from the left.

Additional Support

Have the pupils explain the concept of an ecosystem to a partner and then the partner explain it back to the class.

Resources

Jenga and/or Online Jenga Game.

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Suggested Follow-On Activities

Come up with your own way to illustrate the fragility of the eco system; using a board game, dice or other game OR research some examples of ecosystems.

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5-6

6-7

7-8

8-9

9-10

10-11

11-12

We are learning

About how the type of food we choose affects biodiversity.

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We can now...

Explain how to make more sustainable food choices that encourage biodiversity.



Activity

Did you know that there are around 23 billion chickens on the planet at any one time? That's over 70% of all the birds on the planet! They are also evolving at an incredible rate! Why do you think this is? In what ways could this be harmful? While chicken is an important part of many people's diet, we should consider how to make more sustainable food choices in terms of biodiversity? Rise of the animals: write a short story about what would happen if one animal took over the world.

Digital / At Home Version

Complete the same activity either digitally or on paper.

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Additional Challenge

Read this article for ideas on the super-evolution of chickens to inform your story.

Additional Support

Work in groups or pairs to plan their story in advance.

Resources

Pens, pencils and recycled paper OR computer.

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Suggested Follow-On Activities

Create a short film of your story and share online using the hashtag #STEAMatJacobs.

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5-6

6-7

7-8

8-9

9-10

10-11

11-12

We are learning

About a complicated ecosystem and explaining why it is important.

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We can now...

Explain why a complex ecosystem can be beneficial.

Activity

Have a discussion around the importance of the rainforest in terms of biodiversity. Split the class into groups.

Group 1 will research why the rainforest is so diverse.

Group 2 will look at the number of living things in the rainforest.

Group 3 will research where we can find rainforests on the Earth.

Group 4 will look at why the biodiversity in the rainforests is so important.

Group 5 will find out what some of the threats to the rainforest are.

Come back together as a class and discuss the answers the pupils found and try to come up with some ideas about how to help save the rainforests.

Digital / At Home Version

Complete the activity in the same way.

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Additional Challenge

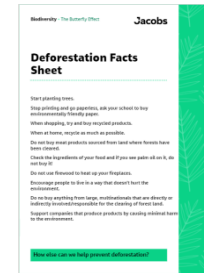
Assign more than one research topic to each group.

Additional Support

Add a Group 6 who can research some ways to save the rainforest online OR use the Deforestation Facts Sheet. Provide some key words to help the pupils begin their searches.

Resources

Computers for research and Deforestation Facts Sheet. (Can be completed digitally or on the board)



Suggested Follow-On Activities

Design a poster to show why the rainforest is important and some ideas about how people can save it. Use the hashtag #STEAMatJacobs to share online.

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