



Create engaging lessons with Adobe Photoshop

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Design a diagram about the species in an ecosystem

Combined science, chemistry, physics, and biology

Use Adobe Photoshop to illustrate a diagram about all of the species in an ecosystem and the role they play in sustaining the ecosystem. Students must research, evaluate, and create an informative diagram. This lesson plan is appropriate for Year 7 to Year 11 students and is useful as a revision resource.

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Learning objectives

This lesson plan gives students the skills to:

- · Identify and research the ecosystem they're studying
- Present information in an easy-to-digest, accessible format
- Use digital tools to display content effectively and construct knowledge
- Identify and create a visually satisfying, demonstrative diagram with accurate information



Student brief

Give the following brief to your students to follow:

You will research and select key information about an ecosystem. You will provide information to highlight the key facts and deeper knowledge of the topic and present it as a professional, well-designed diagram created in Adobe Photoshop.

Steps

Research (recommended time: 30 minutes)

Based on your knowledge, you can choose to either create a diagram about an ecosystem you have already studied or an entirely new one. When creating the diagram, you must understand the key facts about ecosystems and how the hierarchy works. Research:

- What keystone species, keystone mutuals, modifiers, hosts, and prey are
- How each of the different species' affect the others and how they work cohesively together in one ecosystem

Once you have an understanding of the inner workings of ecosystems, highlight the keystone species of the ecosystem you're creating the diagram for. If you don't have an ecosystem picked out, below are some examples of keystone species to use:

- Grey wolf
- Tiger shark
- Sea otter
- Jaguar
- · African elephant

Research what affect the removal of your keystone species would have on the ecosystem. Would the numbers of their prey double? How would that affect the other animals?

Design (recommended time: 60 - 120 minutes)

On a piece of paper, create a rough draft of your diagram. Consider:

- · Where will you place each species on the diagram?
- · How will you show the relationship between organisms in your ecosystem?
- · Where will you place explanatory text?
- How will you make your diagram stand out and be visually appealing?

Once you have determined the layout of information and what graphic elements to include on the page, consider how you will make it visually appealing:

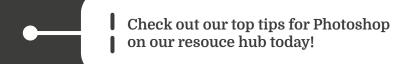
- Pick fonts and images that reflect the ecosystem you're talking about, and use white space to keep the design consistent, clean, and easy to digest
- Think about hierarchical elements like headers, images, and call-out boxes. Consider how close each element is to each other, making sure each element has space around it
- · Include relevant elements such as headshots and quotes

Open Adobe Photoshop and begin your design. Use images of the different animals compiled in the correct place in the diagram to build your food web, then use small sections of text to explain your diagram and why you have placed each species where it is.

Submit your diagram

Once you have completed your research, content creation, and design, submit to your teacher to mark or to a peer to review. Find information you will be evaluated on in the rubric.

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Rubric	
Explanation	Student states clearly all essential information of their ecosystem, including keystone species and food webs. Ensure the information is delivered in a way that shows full, critical understanding of the subject.
Execution	The student demonstrated full, detailed attention to the successful execution of diagram creation including organisation, visual and text content, formatting, and stylistic choices.
Tools used	The student used Adobe Photoshop efficiently, resulting in a comprehensive final document.



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