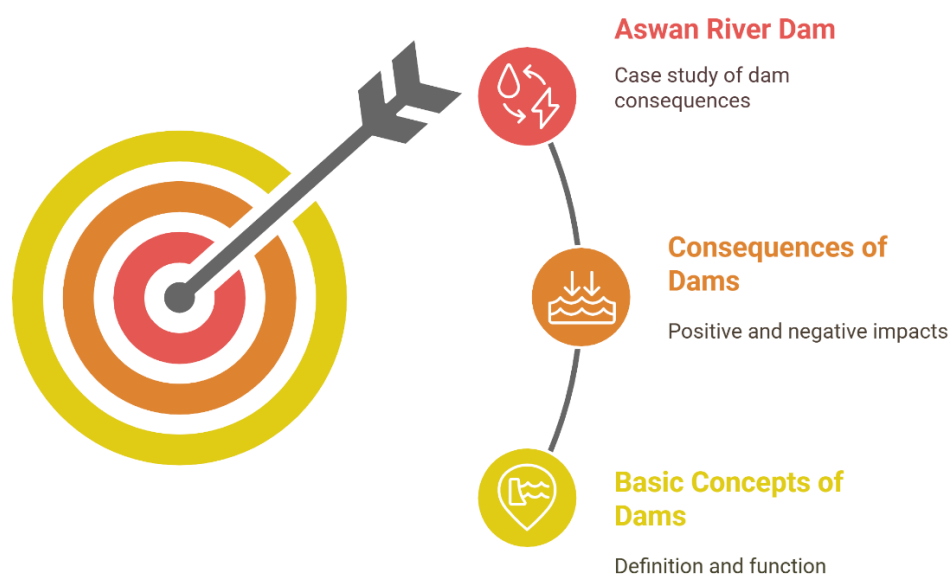


Rivers and Dams: Getting Power and Water

Overall Unit Goal: To understand the positive and negative consequences of building dams, using the Aswan River Dam in Egypt as a case study.

Lesson 1: What is a Dam? Understanding Basic Concepts

Understanding Dams and Their Consequences



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<u>Content Objectives:</u>	Students will be able to name the main purpose of a dam
<u>Language Objectives:</u>	Students will be able to describe a dam by stating facts and regular actions—for example, "A dam holds back water" or "It provides electricity."
<u>Vocabulary</u>	Mandatory: to flow, river, dam, lake, irrigation, hydroelectric power, flooding. Compatible: barrier, across, stop, control, water, creates, behind, why, want, build.

Activities:

1. Match the word to the image

	Images	
to flow		
river		
dam – a barrier across a river		
lake-formed behind a dam		
irrigation		
hydroelectric power		
Flooding		

2. **What is a dam?** a dam is built across a river to stop or control the **flow** of water. This creates a **lake** behind the dam. Why would people want to build a dam? [Take this quiz](#)

Lesson 2: The Nile River and the Need for a Dam

<u>Content Objectives:</u>	Students will be able to name TWO reasons why the Aswan Dam was built
<u>Language Objectives:</u>	Students will use the Past Simple tense to describe key historical facts about the Aswan Dam.
<u>Vocabulary</u>	Mandatory: Aswan Dam, Nile River, irrigation, hydroelectric power, control the flow. Compatible: ancient Egypt, crops, people, build.



Activities:

1. **Geography Focus:** Locate Egypt and the Nile River on a map. Point out that the Nile River is a very long river.
2. **Video Introduction:** introducing the Nile River)-watch the clip <https://youtu.be/iJhqKwM9JIs> (Aswan dam 2:40 minute)

Learn about the Nile history :[Nile River and Dams \(minute 4:00\)](#)

- Why was the **Nile River** so important for the people of **ancient Egypt**?
- What happened when the **Nile River flooded** each year?



The Nile in Cairo, Wikipedia. <https://en.wikipedia.org/wiki/Nile>

Lesson 3: Positive Results of the Aswan Dam

<u>Content Objectives:</u>	Students will be able to explain two positive results of the Aswan Dam
<u>Language Objectives:</u>	Students will be able to use the conjunction "because" to explain the cause-and-effect relationship of positive results
<u>Vocabulary</u>	<p>Mandatory: positive result, water supply, renewable energy, fewer floods ..., income.</p> <p>Compatible: stable, supply, clean, protect, devastating</p>



Activities:

1. **Focus on "Positive Result":** Explain the meaning of "positive result". The cause happens first, and the result happens later. For example,



Building a dam

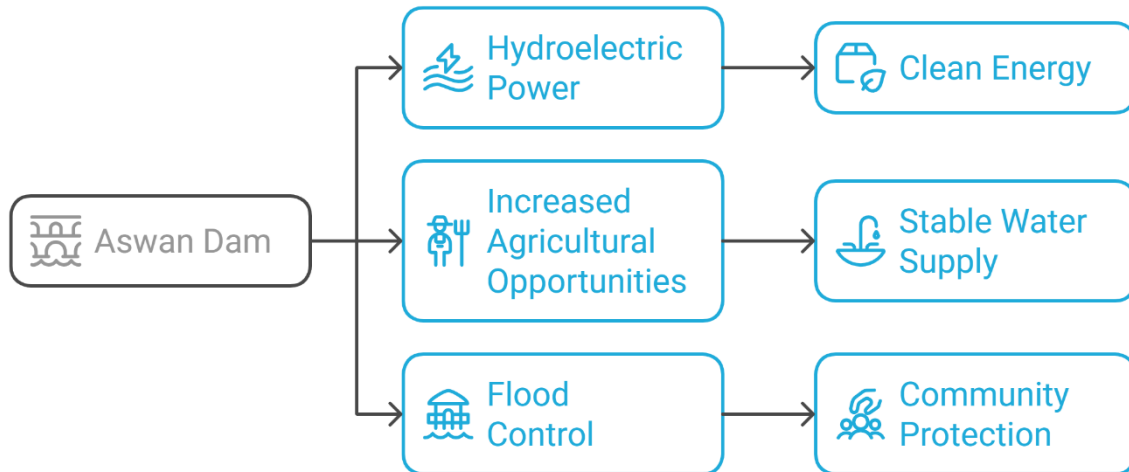


fewer floods like this one

Because they built the Aswan Dam, fewer homes get flooded.

2. **Reading and Matching:** Read the sentences that describe positive results of the Aswan Dam (e.g., provides water for crops, provides electric power, fewer homes get flooded, can grow more types of fruits).
- The Aswan Dam made it possible to generate **hydroelectric power**, which is electricity produced from water. This provides a source of clean, renewable energy and reduces reliance on fossil fuels.
 - The dam led to **increased agricultural opportunities and income** because farmers could grow more crops like bananas and citrus fruits, resulting in them earning more money. This was achieved through a more stable water supply for irrigation, reducing dependence on seasonal rainfall
 - The building of the Aswan Dam resulted in **fewer homes being flooded**. The dam helps to control the flow of the Nile River and protect against devastating floods , thus safeguarding communities living near the river.

Benefits of the Aswan Dam



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Sentence Completion

- The Aswan Dam helps farmers because it provides a steady supply of _____.
☞ (Answer: water)
- People have more electricity because the dam produces _____ energy.
☞ (Answer: renewable or hydroelectric)

3. The dam helps protect homes because it reduces the number of dangerous _____.
 (Answer: floods)
4. Farmers can earn more _____ because they can grow more fruits like bananas and oranges.
 (Answer: income)
5. The water supply is more _____ because the dam controls the flow of the Nile River.
 (Answer: stable)

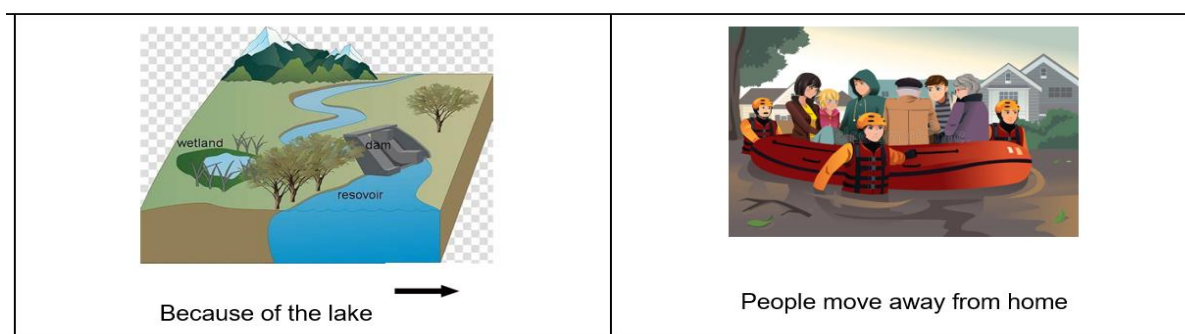
Lesson 4: Negative Results of the Aswan Dam

<u>Content Objectives:</u>	Students will be able to describe at least two negative consequences of the Aswan Dam's construction
<u>Language Objectives:</u>	Students will be able to use comparative adjectives (e.g., less fertile, more expensive) to discuss the negative changes caused by the dam
<u>Vocabulary</u>	Mandatory: negative result, flooding, silt, nutrients, artificial fertilizers, soil erosion, displacement Compatible: lake, move away, fertile, expensive, disrupt , relocate



Activities:

1. **Focus on "Negative Result":** Explain the meaning of "negative result"
 For example,



The Aswan Dam made a big lake. Because of that, thousands of people had to leave their homes.

2. **Reading and Discussion:** Read the sentences that describe negative environmental results:

- Sediment (silt and sand) was good for farmers but is now blocked.
- This lack of silt makes the soil less fertile.
- Farmers now need to use expensive artificial fertilizers.
- The dam takes away silt and sand from the Nile delta, which is bad for farming and causes salty seawater to enter the land.
- Fewer nutrients for plants.

Visualisation: Negative and positive results of the Aswan Dam



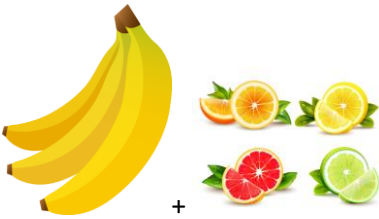

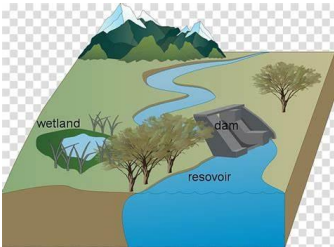

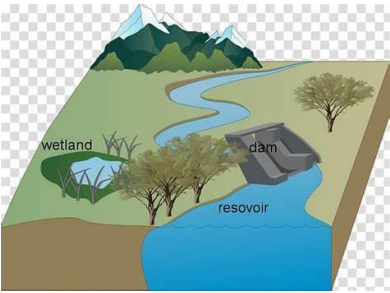

1 Look at the images. The cause happens first, and the result happens later.








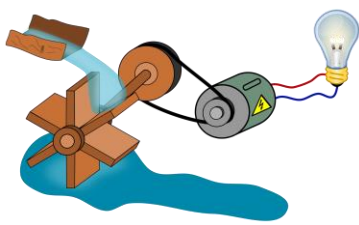
2. match images A, B, C, D, E, F, G, H with sentences 1, 2, 3, 4, 5, 6, 7, 8

(for example, image A is Sentence 5: They removed archaeological sites and monuments, and it cost millions of dollars.)

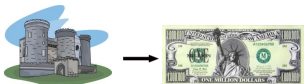
3. With a partner, decide if each sentence is a negative or positive result of the dam.

Study images A-H		
What is the sentence that goes with each?		
image	cause	result

A		<p>\$40,000,000</p> 
B	<p>More of this</p> 	<p>more of this</p> 
C	 <p>A dam and a lake</p>	 <p>flooded</p>
D	 <p>Because of the lake</p>	 <p>People move away from home</p>

E	 <p>Building a dam →</p>	 <p>fewer floods like this one</p>
F	 <p>Building a dam →</p>	 <p>fewer nutrients for plants</p>
G	 <p>The river does not do deposit silt and sand →</p>	 <p>People use more</p>
H	 <p>Hydroelectric power →</p>	 <p>Turn in the lights at home</p>

Letter	Which sentence goes for A, B, C, D, E, F, G and H?
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	 <p>'A' above is sentence '5' below</p>
	1. The Aswan Dam made a big lake. Because of that, thousands of people had to leave their homes.
	2. The Aswan Dam made a big lake. Some archaeological (very old) sites and monuments went under water.
	<p>3. The dam makes the soil less fertile, so people use artificial fertilizers.</p> <p>The dam prevented flooding in the agricultural areas, which was good. But it also stopped mud from flooding in, and that was bad because the mud was great for making the plants grow. So now, the farmers have to spend more money on special plant food.</p>
	4. They can grow bananas and citrus (e.g., an orange) fruits, so people have more income (money they earn).
A	5.They removed archaeological sites and monuments, and it cost millions of dollars.
	6. There are fewer floods downriver (in the direction of the river's flow) , the soil loses nutrients (plant food) that plants need.
	7. Because they built the Aswan Dam, fewer homes get flooded.
	8. A hydroelectric (waterpower) dam makes energy for turning on lights inside a house.

Answers (up to students-teachers to give final 'negative' or 'positive' judgment							
1-D negative	2-C negative	3-G negative	4-B positive	5-A negative	6-F negative	7-E positive	8-H positive