

### Student task:

1. Cut out the cards.
2. Read the cards carefully.
3. Sort the cards into the following categories:
  - general background information
  - causes
  - consequences
4. Working in pairs/groups, use the cards to discuss the answer to the question: 'Why is the Dead Sea shrinking?'

### Extended writing task:

- Using the cards write an answer to the question: 'Why is the Dead Sea shrinking?'
- Include evidence from the cards to support the points and explanations you provide.

### Helpful definitions:

#### Underground aquifer:

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An underground layer of water-bearing permeable rock, rock fractures or unconsolidated materials (gravel, sand, or silt).

#### Evaporation ponds:

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Artificial ponds with very large surface areas that are designed to efficiently evaporate water by sunlight and exposure to the ambient temperatures.

#### Potash:

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A nutrient form of potassium used in agriculture and horticulture as fertiliser.

#### Irrigation:

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The supply of water to land or crops to help growth, typically by means of channels.

#### Cash crops:

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A crop produced for its commercial value rather than for use by the grower.

## Why is the Dead Sea shrinking?

<p>The area is extremely arid with less than 100mm of rainfall a year</p>	<p>Population growth in all three nations - Israel, Jordan and Palestine. Their populations have nearly tripled since 1970</p>	<p>The River Jordan flows into the Dead Sea, but there is less and less input from the river each year</p>
<p>Water diversions, storage and management decrease the flow of the River Jordan from 1300 million m<sup>3</sup> a year in 1960 to 20 million m<sup>3</sup> a year. 98% drop in flow</p>	<p>Average temperatures are over 30<sup>o</sup>c, day time temperatures are over 40<sup>o</sup>c</p> <p>Evaporation ponds are used to harvest salt and manufacture potash</p>	<p>The sea is filled in two ways, by the River Jordan from the north and by the underground aquifers and springs</p>
<p>The southern section of the Dead Sea is used for two metre-deep evaporation ponds. These ponds have been responsible for over 30% of the water that has been lost</p>	<p>Israel's population was three million in 1970 and was over eight million in 2014</p> <p>Agriculture provides jobs and 50% of local incomes</p>	<p>Over 400 million m<sup>3</sup> of water is needed to manufacture potash. Only half of the water is returned to the sea</p> <p>The Wehda Dam and reservoir was built on the River Yarmouk</p>
<p>In 1965 the Israeli government built the National Water Carrier to transport water from the River Jordan to Israel</p>	<p>Israel and Jordan have experienced increasing personal wealth. In Jordan income has risen from \$1000 a year in 1970 to over \$6000 by 2012</p>	<p>These countries have become important food producers for European nations, particular for out of season fruit and vegetables</p>
<p>In 1966 the Jordanian government established the East Ghor Canal using the Yarmouk River, a tributary of the River Jordan</p>	<p>There is significant industry found along the banks of the River Jordan</p>	<p>Water for irrigation is essential, major cash crops include olives and dates for both international and home markets</p>
<p>The sea has lost over 20 million m<sup>3</sup> and has lost a third of its surface area in 80 years</p>	<p>Irrigation leads to mass removal of fresh water before it reaches the Dead Sea, alongside poor irrigation techniques and inefficient use of water</p>	<p>The Dead Sea has been cut in half and reduced in length from 75km to 55km. Current reduction is 1m per year</p>

