



TOPIC	Deserts
SUB-TOPIC	Hot and Cold Deserts
DURATION	30 minutes

CURRICULAR GOALS	CG: 1 Comprehends and interprets sources related to different aspects of human life and makes meaningful interpretations
COMPETENCIES AS PER NCF/NIPUN BHARAT	C-1.2 Represents and analyses data related to various aspects of human life given in the form of text,table,charts,diagrams and maps.
SDG (Sustainable Development Goals)	SDG 15 - Life on Land

Collaborative Learning Approaches	Numbered Heads together
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Technology aids	PPT: LTP_Hot and Cold Deserts.pptx
Assessment - Of Learning(AOL)/ For Learning(AFL)/ As Learning(AAL)	Assessment As Learning (AAL): Numbered Heads Together
Previous Knowledge Required	Knowledge about different landforms

Specific Learning Outcomes

Students will be able to

- apply their knowledge to identify the landform
- analyse the features of hot and cold deserts
- assess their knowledge on hot and cold deserts

Note to teacher: The methodologies given below, referred to as assets, are used to teach the concept. To learn more about these asset types, please refer to the Graphic Organiser (GO) provided at the end of this document.



Asset type: Inquisitive Questions (IQ)

Asset title: IQ_Hot and Cold Deserts

Duration: 3 Minutes

Specific Learning Outcome: Students will be able to apply their knowledge to identify the landform.

Note to the Teacher: Display the relevant slides from the PPT **LTP_ Hot and Cold Deserts.pptx** and ask the 3 inquisitive questions. This is to set the context of the topic.

Q1. Identify the landforms shown in the pictures.

Ans: The two pictures displayed are: 1. A hot desert and 2. A cold desert. Students should be able to identify the hot desert based on prior knowledge, while the second picture (cold desert) may not be correctly identified as a cold desert.

Q2. Mention some features of a desert. (*Ans: features as given on slide*)

Q3. Do you think this (*show image of the cold desert again*) can be a desert based on the features of a desert? Why or why not?

Asset type: Main Script (MS)

Asset title: MS_Hot and Cold deserts

Duration: 7 Minutes

Specific Learning Outcome: Students will be able to analyse the features of hot and cold deserts.

Note to the Teacher: Start with the definition of hot and cold desert.

- **Definition of a desert:** A desert is an arid region characterised by extremely high or low temperatures and has scarce vegetation. Depending on the temperatures there can be hot deserts or cold deserts.
- Give a few examples for Hot and Cold deserts → Hot desert - Thar Desert, Sahara Desert; Cold Desert - Gobi Desert (China), Atacama Desert (South America), Ladakh (India)
- Display the relevant slides from the PPT **LTP_ Hot and Cold Deserts.pptx** that has the table of 'Comparative Features of Hot and Cold Deserts'.
- Allow the students to observe and analyse the features provided in the table in silence.

Asset type: Questions to Assess (QA)

Asset title: QA_Hot and Cold deserts

Duration: 20 Minutes

Specific Learning Outcome: Students will be able to assess their knowledge on hot and cold deserts.

Note to the Teacher: Conduct assessment of students' learning on the topic using the Numbered Heads Together cooperative technique:

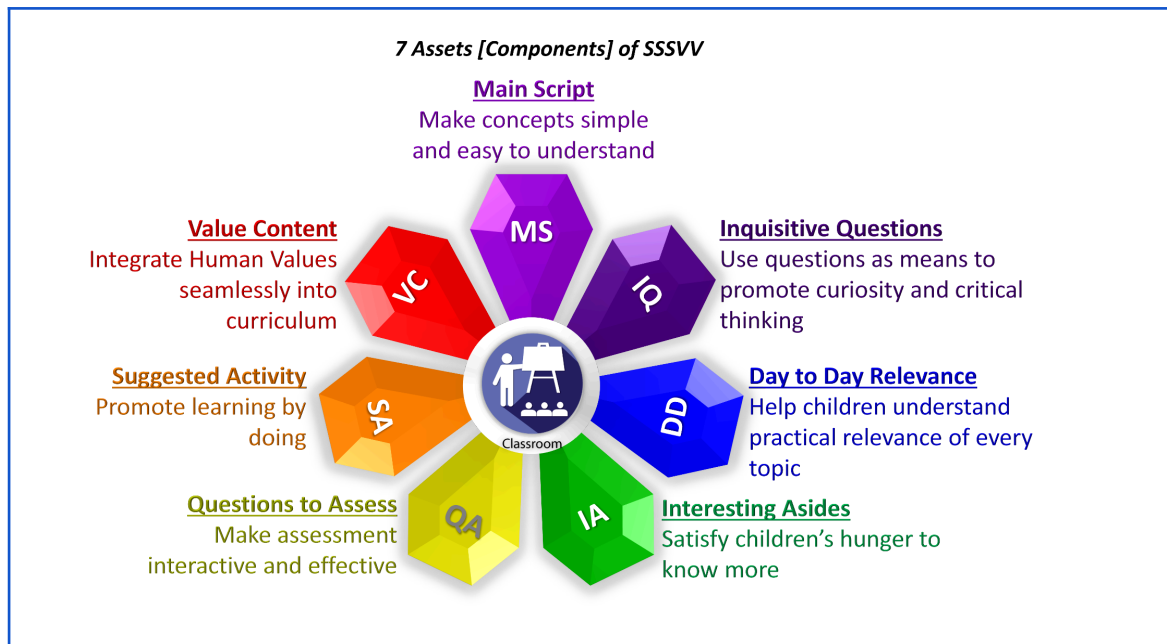
- Split the class into groups of 4. Each student in each group is assigned a number (1–4).
- Write down a few thought-provoking questions on the board (at least 4) based on the table displayed on the PPT. (*Suggestions for questions given below*)
- Give 5 to 7 mins for the students to brainstorm among the group and find answers to these questions.
- Call out a random number (for example: "All Number 2s, stand up!"). The chosen students or stand up to answer on behalf of their entire team .



- After the students finish their turn, provide explanation, add more points if required. Complete the full set of questions from the board.

SUGGESTED QUESTIONS

1. **Question:** Both places are deserts in India, so why is one hot and one cold?
Answer: *The Thar is a low desert near the sea level, where the sun is very strong, but Ladakh is a high desert up in the mountains, where the air stays freezing cold.*
2. **Question:** Why do temperatures in both deserts change so drastically once the sun sets?
Answer: *Both deserts lack a thick cover of vegetation or moisture in the air to hold onto heat. In the Thar, sand heats up and cools down almost instantly. In Ladakh, the thin air allows heat to escape into space the moment the sun goes down.*
3. **Question:** Why does Ladakh receive so little rain even though it is located in the middle of the Himalayas?
Answer: *Ladakh lies in the 'rain shadow' area of the Himalayas. The high mountains block the rain-bearing clouds from reaching the region, leaving it dry while the other side of the mountains gets heavy rain.*
4. **Question:** Could a camel and a yak swap homes? Why or why not?
Answer: *No. A camel has thin hair to stay cool and would freeze in Ladakh. A yak has thick fur and lots of body fat to stay warm; it would get heatstroke in the Thar very quickly.*
5. **Question:** Why is 'layering' essential in Ladakh, while 'covering' with loose fabric is the priority in the Thar?
Answer: *In Ladakh, layers trap air to keep the body warm. In the Thar, loose cotton clothes allow air to circulate to cool the body, while turbans and long robes protect the skin from direct sun and blowing sand.*
6. **Question:** Since it almost never rains in either desert, why is Ladakh full of ice and the Thar full of sand?
Answer: *Ladakh is so high in the mountains that it is freezing cold, so the little water it has stays as ice (glaciers). The Thar is low and hot, so any water quickly evaporates, leaving behind dry sand.*
7. **Question:** Imagine yourself standing in the middle of each desert. What do you see?
Answer: *In the Thar, you would see a vast sea of sand with rolling dunes. In Ladakh, you would see a high altitude desert with jagged, naked mountain peaks and deep, rocky gorges.*
8. **Question:** In the Thar, people can farm or herd animals all year round. In Ladakh, most people have to change their jobs and stay indoors for almost six months of the year. Why do you think so?
Answer: *Ladakh has such a harsh winter that the ground freezes like stone, making farming impossible. During these months, people switch to indoor work like weaving wool, repairing tools, or celebrating community festivals until the ice melts.*



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