**Instructions**

**Step** **1**: Read the text below – about Kangaroos and adaptations.

**Step** **2**: In the introduction, what are the **3** **types** of adaptations mentioned?

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**Step** **3**: Underline in the text where it describes the environment kangaroos have adapted to.

**Step** **4**: What makes this environment difficult to live in?

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**Step** **5**: The text contains some information in bullet points. For each bullet point, name (in one to three words) the adaptation described. For each adaptation circle the body system which has been adapted.

|  |  |
| --- | --- |
| **Adaptations**  (one for each of the bullet points in the text) | **Body system which has been adapted**  (circle one or more systems which have changed to cause the adaptation) |
|  | Digestive Skeletal Integumentary circulatory reproductive Muscular Renal/Urinary Nervous Endocrine |
|  | Digestive Skeletal Integumentary circulatory reproductive Muscular Renal/Urinary Nervous Endocrine |
|  | Digestive Skeletal Integumentary circulatory reproductive Muscular Renal/Urinary Nervous Endocrine |
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|  | Digestive Skeletal Integumentary circulatory reproductive Muscular Renal/Urinary Nervous Endocrine |

**Step 6**: Use the information in the bullet points AND your words in step 5 to complete the following bubble map.

**Structural Adaptations**

**Functional Adaptations**

KANGAROOS

**Behavioural Adaptations**

**Kangaroo adaptations**

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Kangaroos are found in many different regions of Australia, including the desert and semi-arid regions. Kangaroos from these areas have structural, behavioural, and functional adaptations that enable them to survive the harsh conditions.

Kangaroos from desert and semi-arid environments have adapted to drier conditions and have several features that help them deal with the lack of water.

* Kangaroos need very little water to survive. The intestine of the Red Kangaroo reabsorbs water as it passes through which means the kangaroo produces very dry faeces and the little water they have available to them is put to good use by being recycled by their body.
* When they are hot, kangaroos pant to cool down. They also lick their chests and the inside of their forearms until those areas are quite wet. When the moisture evaporates it cools the blood, which circulates close to the surface at these points. This helps keep the animal cool.
* Red kangaroos have long, strong tails for balancing.
* The teeth of the kangaroo have been worn out after eating tough dry grass, the front teeth fall out and the back teeth move forward to replace the front teeth, the kangaroos have four pairs of chewing teeth.
* Kangaroos hop over large distances to find food and water. Hopping is a fast, energy efficient way to travel. The kangaroo can cover large distances without using a lot of energy.
* Kangaroos are mostly active in the early morning or evening, when it is cooler. During the day, when the temperature is most extreme, kangaroos spend the time lazing around under the shade of trees.
* The female kangaroo’s efficient breeding cycle also assists them in surviving the harsh environment. They have the ability, when pregnant, to put the growth of the embryo on hold until external conditions improve. This means young kangaroos are not born when the environment is very dangerous.

## References

‘[Nature notes – Red Kangaroo’](http://www.alicespringsdesertpark.com.au/kids/nature/mammals/kangaroo.shtml), Alice Springs Desert Park website, <http://www.alicespringsdesertpark.com.au/kids/nature/mammals/kangaroo.shtml> (2013)

‘[Australian kangaroos – an outback icon’](http://www.outback-australia-travel-secrets.com/australian-kangaroos.html), Outback Australia travel guide website, <http://www.outback-australia-travel-secrets.com/australian-kangaroos.html> (2013)