Adaptations can be broadly classified into behavioural adaptations and structural adaptations. Study the pictures and descriptions of the animals below carefully and match them with the type(s) of adaptation these animals have.

- The modified body of a stick insect allows it to hide from predators.
- A Fennec fox hibernates during the long cold winter months.
- A chameleon changes colour to attract a mate.
- Geese migrate to warmer countries to escape winter.
- The oar-like legs of a water boatman help propel it in water.
How Are Animals Adapted to Their Environment?

Classify the animals below according to how they breathe in water in the table provided.

<table>
<thead>
<tr>
<th>Animals</th>
<th>Methods of breathing in water</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humpback whale</td>
<td></td>
</tr>
<tr>
<td>Tadpole</td>
<td></td>
</tr>
<tr>
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<td></td>
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<tr>
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</tr>
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<td>Great diving beetle</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Air bubble</th>
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<th>Lungs</th>
<th>Breathing tube</th>
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<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
Consolidation Worksheet 3

How Are Plants Adapted to Their Environment?

Seeds are dispersed from their parent plants mainly by these four methods:
• By animals
• By wind
• By water
• By splitting

Study the plants and seeds below and write down below each picture the method by which the seeds are dispersed from the parent plant.

- Burdock
- Saga seeds
- Maple seeds
- Coconut
- Raspberries
- Lallang
- Apples
- Mangrove seedling
- Squirting cucumber
**How Are Different Organisms Suited to Their Habitats?**

The grassland is a warm and dry habitat. Fill in the blanks below to describe how each organism has adapted to surviving in this environment.

### Acacia trees

Acacia trees have long _________ that grow deep underground. The trees have developed long sharp _________ to discourage animals from eating their leaves.

### Cheetah

The cheetah has powerful _________ that enable it to run fast to catch its prey. Its body also _________ with its surroundings so that it is unseen by its prey. Its sharp _________ and _________ can grip and tear the flesh of its prey easily.

### Zebra

The zebra eats _________ that grows in abundance in this habitat. The _________ on its body help it to blend in with its surroundings. It confuses its predators by living in a _________ with other zebras as protection.
How Are Different Organisms Suited to Their Habitats?

The grassland is a warm and dry habitat. Fill in the blanks below to describe how each organism has adapted to surviving in this environment.

**Acacia trees** have long roots that grow deep underground. The trees have developed long sharp thorns to discourage animals from eating their leaves.

**Zebra**

**Cheetah**

The cheetah has powerful legs that enable it to run fast to catch its prey. Its body also matches with its surroundings so that it is unseen by its prey. Its sharp teeth and claws can grip and tear the flesh of its prey easily.

The zebra eats grass that grows in abundance in this habitat. The stripes on its body help it to blend in with its surroundings. It confuses its predators by living in a herd with other zebras as protection.

---

**Fun and Games**

**Crossword Puzzle!**

Complete the crossword puzzle using the clues given below.

```
1
2 3
4 5
6 7
8
9
10 11
12 13

Clues:
1. A type of grass that grows in abundance in the grassland
2. A type of animal that lives in herds
3. A type of animal that has powerful legs
4. A type of animal that has sharp teeth and claws
5. A type of animal that has thorns
6. A type of animal that has stripes
7. A type of animal that has long roots
8. A type of animal that has legs
9. A type of animal that has a body
10. A type of animal that has claws
11. A type of animal that has thorns
12. A type of animal that has teeth
13. A type of animal that is unseen
```
Down:
1. A _____ adaptation refers to the way an organism behaves to stay alive in its environment.
3. The penguin has a _____ body that helps it to move quickly in water.
4. Animals that breathe through _____ can take in oxygen from the water.
5. Leopard spots make an excellent _____ that enables the leopard to hide from unsuspecting prey.
6. The leaves of most aquatic plants are waxy to keep them _____.
9. The bones of birds that can fly are _____, reducing their body weight.
11. The pea plant uses its _____ that coil to climb structures for support.
13. Seeds that are dispersed by _____ are usually small and light.

Across:
2. When a brown bear _____ during winter, it goes into a deep sleep where its heart rate slows down and its body temperature drops.
7. Salmon are fish that live in the sea and _____ to fresh water to reproduce.
8. A _____ adaptation refers to a physical feature of an organism that helps it to survive in its environment.
10. When a butterfly gets nectar from flowers, it also helps to _____ the flowers.
12. The whale has a _____ at the top of its head through which it breathes in air.
Adaptations

Exam Practice

Process skills: Observing, Analysing

Ari tried to grow Plant X, shown below, in a desert. The plant died a few days later.

![Plant X](image)

A few days later

a. State two features of Plant X that made it unsuitable for surviving in the desert. [2 marks]

b. Explain your answer in ‘a’. 2 marks

Hint: How do the features mentioned in ‘a’ affect Plant X in terms of its tendency to lose water to the surroundings and its ability to absorb water?
Adaptations can be broadly classified into behavioural adaptations and structural adaptations. Study the pictures and descriptions of the animals below carefully and match them with the type(s) of adaptation these animals have.

- The modified body of a stick insect allows it to hide from predators.
- A Fennec fox hibernates during the long cold winter months.
- A chameleon changes colour to attract a mate.
- Geese migrate to warmer countries to escape winter.
- The oar-like legs of a water boatman help propel it in water.
- The modified body of a stick insect allows it to hide from predators.

**What Are Adaptations?**

**Consolidation Worksheet 1**

**How Are Animals Adapted to Their Environment?**

Classify the animals below according to how they breathe in water in the table provided.

<table>
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How Are Plants Adapted to Their Environment?

Seeds are dispersed from their parent plant mainly by these four methods:

- By animals
- By water
- By splitting
- By wind

Study the plants and seeds below and write down below each picture the method by which the seeds are dispersed from the parent plant.

- Burdock
- Maple seeds
- Sago seeds
- Coconut
- Raspberry
- Mango seedling
- Apples
- Squirtling cucumber
- Lolang
- Lallang
- Apples
- Mangrove seedling

How Are Different Organisms Suited to Their Habitats?

The grassland is a warm and dry habitat. Fill in the blanks below to describe how each organism has adapted to surviving in this environment.

Acacia trees:
- roots
- thorns
- that grow deep underground.
- developed long sharp thorns to discourage animals from eating their leaves.

Cheetah:
- has powerful legs.
- to catch its prey.
- its body also camouflages with its surroundings so that it is unseen by its prey.
- sharp teeth and claws can grip and bear the flesh of its prey easily.

Zebra:
- eats grass that grows in abundance in this habitat.
- on its body help it to blend in with its surroundings.
- living in a group as protection.
Crossword Puzzle!

Complete the crossword puzzle using the clues given below.

Down:
1. A ______ adaptation refers to the way an organism behaves to stay alive in its environment.
2. When a brown bear ______ during winter, it goes into a deep sleep where its heart rate slows down and its body temperature drops.
3. The penguin has a ______ body that helps it to move quickly in water.
4. Animals that breathe through ______ can take in oxygen from the water.
5. Leopard spots make an excellent ______ that enables the leopard to hide from unsuspecting prey.
6. The leaves of most aquatic plants are waxy to keep them ______.
7. Salmon are fish that live in the sea and ______ to fresh water to reproduce.
8. A ______ adaptation refers to a physical feature of an organism that helps it to survive in its environment.
9. The bones of birds that can fly are ______ reducing their body weight.
10. When a butterfly gets nectar from flowers, it also helps to ______ the flowers.
11. The pea plant uses its ______ that coil to climb structures for support.
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10. When a butterfly gets nectar from flowers, it also helps to ______ the flowers.
12. The whale has a ______ at the top of its head through which it breathes in air.
Adaptations

Name: ___________________________ Class: _________ Date: _________

Exam Practice

Process skills: Observing, Analysing

Ari tried to grow Plant X, shown below, in a desert. The plant died a few days later.

a. State two features of Plant X that made it unsuitable for surviving in the desert. [2 marks]
   Large leaves and short roots

b. Explain your answer in 'a'. 2 marks]
   The large leaves caused the plant to lose a lot of water in the desert heat. The short roots were not able to absorb enough water from the ground.

Hint: How do the features mentioned in 'a' affect Plant X in terms of its tendency to lose water to the surroundings and its ability to absorb water?
# Glossary

## Chapter 4: Adaptations

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adaptation</td>
<td>A special characteristic that an organism has so that it can survive in its habitat</td>
</tr>
<tr>
<td>Behavioral adaptation</td>
<td>The way an organism acts or behaves to survive in its habitat, such as living in groups</td>
</tr>
<tr>
<td>Blowhole</td>
<td>A hole found on the top of the heads of some aquatic animals that they breathe through</td>
</tr>
<tr>
<td>Breathing tube</td>
<td>A tube used by some aquatic animals to take in air</td>
</tr>
<tr>
<td>Camouflage</td>
<td>An organism’s ability to blend its body colour, shape or texture to match its surroundings</td>
</tr>
<tr>
<td>Climbers</td>
<td>Plants that climb onto supports using their clasping roots</td>
</tr>
<tr>
<td>Creepers</td>
<td>Plants that have long and thin stems which grow on the surface of the ground</td>
</tr>
<tr>
<td>Hibernate</td>
<td>To enter an inactive state in which most body functions are slowed down to conserve energy so as to survive a period of time when food is scarce, especially during winter</td>
</tr>
<tr>
<td>Migrate</td>
<td>To move from one location to another periodically or seasonally</td>
</tr>
<tr>
<td>Streamlined</td>
<td>A body shape which many aquatic animals and birds have that allows them to overcome water resistance or air resistance respectively so that they can move with greater speed and ease</td>
</tr>
<tr>
<td>Structural adaptation</td>
<td>A physical feature of an organism which helps it to survive in its habitat</td>
</tr>
<tr>
<td>Tendrils</td>
<td>Modified leaves which certain plants have that help them hook onto a support so that they can climb vertically to get more sunlight</td>
</tr>
<tr>
<td>Venom</td>
<td>A poisonous substance secreted by animals, such as certain types of snakes and scorpions, usually transmitted through bites or stings</td>
</tr>
</tbody>
</table>