Name: _____ Date: _____

How Hermit Crabs Trade Shells in a Line

Circle group

A hermit crab starts life with a problem. Most crabs have a hard covering on their bodies. A hermit crab has a soft, curved back end. To stay safe, it backs into an empty snail shell. It carries the shell everywhere. When danger comes near, it pulls its body inside.

But a crab keeps growing, and a shell does not. Soon the crab is too big for its home. It must find a larger one. Hermit crabs cannot make shells. They need the empty shells that snails leave behind. Good shells are not always easy to find.

Scientists who study some hermit crabs have seen a pattern called a vacancy chain. One crab finds a large, empty shell. It does not just slide in. Other crabs often gather around, and they line up by size. The biggest crab moves into the new shell first. Its old shell is now free. The next biggest crab takes it. Then the third crab moves into the shell that crab left. This goes on down the line. In the end every crab has a new, roomier home.

One shell can help many crabs. The chain works because each shell that is left is the right size for the crab behind it. A crab may look lonely, but it can still depend on its neighbors.

Questions

1. Why does a hermit crab need a snail shell?

_____

_____

2. Why must a hermit crab change shells as it grows?

_____

_____

3. What is the name for crabs swapping shells in order?

_____

_____

4. Which crab moves into the large new shell first?

_____

_____

5. Why does one new shell help many crabs?

_____

_____

6. What does the last sentence tell us about hermit crabs?

_____

_____

Words to know

vacancy: an empty space that someone could move into
roomier: having more space inside
pattern: something that happens in the same way again and again

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

How Hermit Crabs Trade Shells in a Line

Triangle group

A hermit crab is born with a problem. Unlike most crabs, it has a soft, curved body with no hard covering at the back. To stay safe, it backs into an empty snail shell and carries that shell everywhere, pulling its body inside when danger comes near.

The trouble is that a crab keeps growing and a shell does not. Sooner or later the crab is too big for its home and must find a larger one. Since hermit crabs cannot make shells of their own, they depend on the empty shells that snails leave behind. Good shells are not always easy to find.

Scientists who study some kinds of hermit crabs have noticed a remarkable pattern called a vacancy chain. When one crab discovers a large, empty shell, it does not simply slide in. Other crabs often gather around, and the group lines up by size. The biggest crab moves into the new shell first. Its old shell is now free, and the next biggest crab takes it. Then the third crab moves into the shell that crab left behind, and so on down the line, until every crab has a new and slightly roomier home.

A single shell can improve the lives of many crabs. The chain works because each shell that is left behind is the right size for the animal waiting just behind it. Even a creature that looks lonely and solitary can end up depending on the habits of its neighbors.

Questions

1. Why does a hermit crab need a snail shell?

_____

_____

2. Why must a hermit crab change shells as it grows?

_____

_____

3. What is the name for the pattern of crabs swapping shells in order?

_____

_____

4. Which crab moves into a large new shell first?

_____

_____

5. Why does one new shell help many crabs and not just one?

_____

_____

6. What does the last sentence suggest about hermit crabs?

_____

_____

Words to know

vacancy: an empty space that someone could move into
remarkable: unusual and worth noticing
roomier: having more space inside
solitary: living alone and not with others
pattern: something that happens in the same way again and again

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

How Hermit Crabs Trade Shells in a Line

Square group

A hermit crab is born with an inconvenient problem. Unlike most crabs, it has a soft, curved body with no hard covering at the rear. To remain safe, it backs into an empty snail shell and carries that shell wherever it goes, withdrawing its body inside whenever danger approaches.

The difficulty is that a crab continues to grow while a shell does not. Sooner or later the crab becomes too large for its home and must locate a bigger one. Since hermit crabs are incapable of manufacturing shells of their own, they depend entirely on the empty shells that snails leave behind, and suitable shells are not always easy to come by.

Scientists who study certain kinds of hermit crabs have observed a remarkable pattern known as a vacancy chain. When one crab discovers a large, empty shell, it does not simply slide inside. Other crabs often gather around the find, and the group arranges itself in a line according to size. The largest crab moves into the new shell first, which frees its old shell for the next largest crab. The third crab then occupies the shell that crab has just vacated, and so on down the line, until every crab has acquired a new and slightly roomier home.

A single shell can therefore improve the lives of many crabs. The chain works because each abandoned shell happens to be the right size for the animal waiting just behind. Even a creature that appears lonely and solitary can end up depending on the habits of its neighbors.

Questions

1. Why does a hermit crab need an empty snail shell?

_____

_____

2. Why must a hermit crab change shells as it grows?

_____

_____

3. What is the term for the pattern in which crabs swap shells in order?

_____

_____

4. Which crab moves into a large new shell first?

_____

_____

5. Why does one new shell improve the lives of many crabs rather than just one?

_____

_____

6. What does the final sentence suggest about hermit crabs?

_____

_____

Words to know

vacancy: an empty space that someone could move into
remarkable: unusual and worth noticing
roomier: having more space inside
solitary: living alone and not with others
pattern: something that happens in the same way again and again

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

For the teacher: How Hermit Crabs Trade Shells in a Line

Each student sheet carries a shape, not a level. The same topic and facts, written three ways.

Circle: How Hermit Crabs Trade Shells in a Line

Easier · 220 words · Flesch-Kincaid grade 2.2

1. Its back end is soft, so the shell keeps it safe.
2. The crab grows, but the shell does not.
3. A vacancy chain.
4. The biggest crab.
5. Each crab leaves a shell that fits the next smaller crab.
6. They are not as lonely as they look, since they depend on other crabs.

Triangle: How Hermit Crabs Trade Shells in a Line

This passage · 246 words · Flesch-Kincaid grade 5.9

1. Its back end is soft, so the shell protects it.
2. The crab grows, but the shell does not, so the crab outgrows it.
3. A vacancy chain.
4. The biggest crab.
5. Each crab leaves a shell behind that fits the next smaller crab.
6. They are not as solitary as they seem, since they rely on what other crabs do.

Square: How Hermit Crabs Trade Shells in a Line

Harder · 258 words · Flesch-Kincaid grade 8.7

1. Its rear is soft, so the shell protects it.
2. The crab keeps growing, but the shell stays the same size.
3. A vacancy chain.
4. The largest crab.
5. Each crab leaves behind a shell that fits the next smaller crab in line.
6. They are less solitary than they appear, since they rely on the habits of other crabs.