Expectations



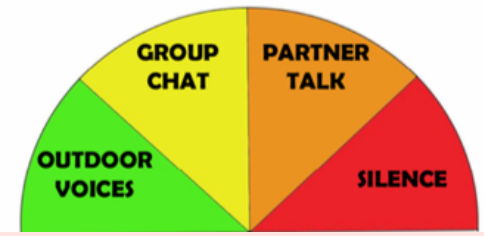
Good listening
Good sitting
Good contributions

Strategy

- Look at each part of the word.
- Look at the pre-fix/suffix of the word. Does this tell us anything?
- Read the full sentence again. Is the word used as a noun, verb or an adjective?
- Is the word similar to another word you are familiar with?

Glossary

characteristics -
inherited -
organism
chromosomes -
segments -
antennae -
homologous-
gene
genotype -



LO: To explore how offspring inherit features from their parents

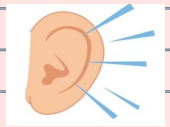
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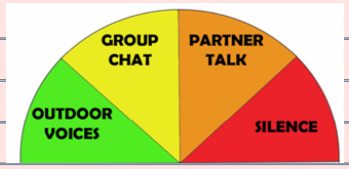
Glossary

characteristics -
inherited -
organism-
chromosomes - part of DNA
segments - parts
antennae - long feelers
homologous-similarity, shared genes
gene -carry information
genotype - genetic make up of an organism

Expectations



Good listening
Good sitting
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LO: To explore how offspring inherit features from their parents

we do

Key Questions

1. What is a Reebop?
2. What are they made from?
3. List 1 safety feature?
4. What is used for a tail?
5. What colour is Dad's envelope?
6. What does genotype BB give you?

you do

we do

LO: To explore how offspring inherit features from their parents

1st read: Read the instructions

Thinking Together:

LO: To explore how offspring inherit features from their parents

we do

Key Questions -answers

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Read 2:

Order the statements A B C D

A - Instructions describing how to make a Reebop
B- Information on what a Reebop is
C- Safety procedures explained
D- Diagram to show what a Reebop looks like

LO: To explore how offspring inherit features from their parents

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Read 3:
Question the author

Making Reebops

The purpose of this practical work is:
1. to examine how characteristics are inherited

Procedure

What are Reebops?

Reebops are imagined animals, made from marshmallows, pins and cocktail sticks.
They have 16 chromosomes (in 8 pairs) in their body cells.

Have a look at the parents – Mum and Dad Reebop. Note their characteristics, such as number of body segments, antennae etc. Both parents have the same features, but one is male and one is female!

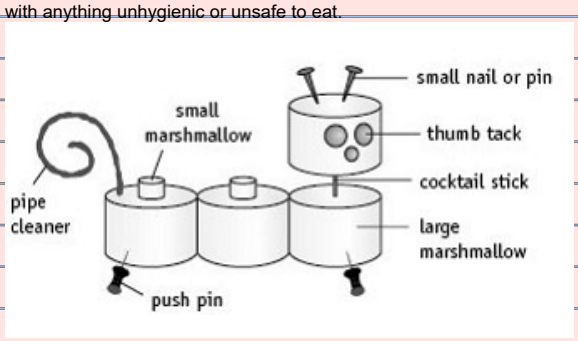
Follow the instructions below to find out what happens when these organisms breed.
Look at all the information sheets before you start.

LO: To explore how offspring inherit features from their parents

we do

Read 3:
Question the author

Procedure
SAFETY:
If you are working in a laboratory, do not eat the marshmallows. Think carefully about whether the marshmallows could have come into contact with anything unhygienic or unsafe to eat.



LO: To explore how offspring inherit features from their parents

we do

Read 3: Question the author

Investigation

a Find your envelope containing Mum Reebop's chromosomes and your envelope containing Dad Reebop chromosomes.

b Open each envelope, take out the cards and turn them face down, keeping Mum's (red) and Dad's (blue) separate as you sort them out.

c Sort each set of chromosomes into pairs of the same length (homologous pairs).

d Now randomly take one chromosome from each pair of Mum's chromosomes and place in a pile.

e Randomly take one chromosome from each pair of Dad's chromosomes and place in a pile.

f Put the chromosomes you haven't used back into their original envelopes.

You have now mixed a selection of half the chromosomes from one parent with a selection of half the chromosomes from the other parent to make a new combination. Each parent donated half the chromosome number (8 chromosomes) to make the adult number (16 – now in 8 homologous pairs again).

g Sort out the chromosomes of your new individual into homologous pairs.

h Write down the letters you have obtained in the table for your 'baby Reebop'. For example, if you have one card with the letter **A** and another card with the letter **a**, your genotype is **Aa**.

i Use the 'decoder key' to decide what the characteristics of your baby Reebop will be based on your genotype description. For example, if is genotype is **BB**, it will have 3 body segments.

j Collect all the materials you need for your baby Reebop body parts. For example, for 3 body segments you need 3 large marshmallows.

k Build your baby Reebop with the characteristics that its genes determine. Join the marshmallows with cocktail sticks.

l Put your baby in the Reebop nursery with the other newborns!

LO: To explore how offspring inherit features from their parents

we do

Let's make Reebops!

QUESTIONS

1. What do you notice about the features of the babies?
2. Are there any babies that are identical?
3. How many are the same as one of their parents? Which parent?

LO: To explore how offspring inherit features from their parents

Let's make Reebops!

QUESTIONS

1. What do you notice about the features of the babies?
2. Are there any babies that are identical?
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I do

Model instructions

Science