

Reproduction

KS3 Biology · Follows the national curriculum

Name _____ Class _____ Date _____

1. Worked example

Compare sexual and asexual reproduction.

Step 1 · Number of parents

Sexual: two parents. Asexual: one parent.

Step 2 · Genetic variation

Sexual: offspring are all different (half their genetic information comes from each parent). Asexual: offspring are clones.

Step 3 · Speed

Asexual is faster and needs no partner; sexual is slower but gives variety.

Answer: Sexual = 2 parents, varied offspring; asexual = 1 parent, identical clones

Check: Neither is 'better' — each suits different conditions.

2. Now try one with the steps

Human body cells have 46 chromosomes. How many are in a sperm, an egg, and a fertilised egg?

Step 1 · Gametes

Step 2 · Fertilisation

Answer:

3. Practice

Show your working. The marks tell you how much is expected.

1. How many parents are involved in asexual reproduction? [1]

2. What are gametes? [1]

3. What are offspring that are genetically identical to their parent called? [1]

4. How many chromosomes are in a human egg cell? [1]
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5. Name TWO ways plants reproduce asexually. [2]
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6. Give ONE advantage of asexual reproduction. [1]
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7. Give ONE advantage of sexual reproduction. [1]
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8. Why do gametes have half the number of chromosomes of body cells? [2]
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9. Explain why siblings with the same parents look different. [2]
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10. A bacterium divides into two every 30 minutes. Starting with 1, how many are there after 3 hours? [2]
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11. Identical twins form when one fertilised egg splits into two. Why are they genetically identical? [1]
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12. Explain why asexual reproduction is useful for a dandelion colonising a new, stable patch of lawn. [2]
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13. Many crops are grown Explain one risk of this. [2]
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14. Aphids reproduce asexually in summer and sexually in autumn. Suggest why. [2]
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4. Before you hand it in

"Asexual reproduction is better than sexual reproduction."

Asexual is quicker in stable conditions; sexual gives variation that helps in changing conditions.

Saying gametes have 46 chromosomes.

Human body cells: 46. Gametes: 23. Fertilised egg: $23 + 23 = 46$.

"Plants only reproduce asexually."

Most flowering plants reproduce sexually (pollination and fertilisation) and many can also reproduce asexually.