

AS 90719

Describe trends in human evolution

Level 3, 3 Credits

This achievement standard involves the description of trends in human biological evolution, cultural evolution, and patterns of dispersal.

Achievement	Achievement with Merit	Achievement with Excellence
Describe trends in human evolution.	Explain trends in human evolution.	Discuss trends in human evolution.

- Trends refers to progressive change over a period of time in relation to:
 - human biological evolution
 - human cultural evolution
 - patterns of dispersal of hominins
 - living and fossil species (belonging to the human lineage)
 - subgroup of hominids which includes both humans and the great apes
- Trends in human biological evolution begin with early bipedal hominins and may require comparison with living hominids (apes)
- Trends are limited to:
 - skeletal changes linked to bipedalism
 - valgus angle (of femur) shifts knees under centre of gravity – improves balance when walking (eliminates swagger / side to side movement)
 - broad & shallow (cup-shaped) pelvis supports internal organs - better attachment for large leg muscles
 - non-divergent toe allows “thrust” in walking
 - compare to quadrupedal features (arms support weight, knuckle-walking; spine not taking full weight)
 - changes in skull and endocranial features
 - changes in manipulative ability of the hand (e.g. comparing Neandertal and gorilla hands)
 - finer / precision grip
 - greater dexterity
 - finer motor control
 - opposable / dextrous thumb - thumb able to touch finger (tips) for precision grip
 - able to manipulate smaller objects
- Trends in human cultural evolution limited to evidence relating to:
 - use of tools
 - stone
 - wood
 - bone
 - fire
 - shelter
 - clothing
 - social behaviour
 - abstract thought
 - communication
 - language
 - art
 - food-gathering
 - domestication of plants and animals (cattle, goats, sheep)

Interpretations on the origins and trends of human evolution will be based on current evidence and may change as a result of recent developments. Evidence relating to human evolution must be scientific evidence which is widely accepted and presented in peer-reviewed scientific journals.

Terms

Describe requires the student to define, use annotated diagrams, give characteristics of, or an account of.

Explain requires the student to provide a reason as to how or why something occurs.

Discuss requires the student to show understanding by linking biological ideas related to the trends in human evolution. It may involve students in justifying, relating, evaluating, comparing and contrasting, and analysing.