

# Checklist (HL)

## Higher level (HL)

### What you should know

After studying this subtopic you should be able to:

- Explain the term gene expression.
- Outline how transcription can be regulated by proteins that bind to DNA.
- Outline how translation can be regulated through the degradation of mRNA.
- Explain the term epigenesis.
- Describe the differences between the genome, transcriptome and proteome of individual cells.
- Outline how methylation can affect gene expression.
- Identify why some epigenetic changes are heritable.
- Describe examples of how the environment can affect gene expression.
- Outline consequences of removing epigenetic tags from human gametes.
- Discuss the use of monozygotic twins to study gene expression.
- Describe examples of external factors that can impact gene expression.

