



Biology and Development

An evolutionary approach



Genes



- Short segments of DNA
- Human have 46 chromosomes (23 pairs)
- Mitosis – cell division of normal cells
- Meiosis – cell division of sex cells – leaves only 23 chromosomes per cell



Genetics cont.

- Dominant-recessive
- Reaction range
- Canalization

	G	g
G	GG	Gg
g	Gg	gg



Genetic engineering

- Testing for genetic disorders
- Ethics
 - Is it ethical to engineer babies so they never have chromosomal abnormalities? What about picking the sex of your baby? Hair and eye color? What about intelligence?



Intelligence

- How much is heredity?
 - Identical twin studies reveal that intelligence is highly biological
- What about environment?
 - The environment, however, can have huge effects on intelligence
- Other factors?