

Green Autosome	A. no chin spike B. nose spike C. three head flaps D. no visible ear hole E. [see * below]	a. chin spike b. no nose spike c. four head flaps d. visible ear hole
Red Autosome	F. long neck G. no back hump H. no back spikes I. long tail J. flat feet	f. short neck g. back hump h. back spikes i. short tail j. arched feet
Orange Autosome	K. red eyes L. spots on neck M. [see † below] N. no fangs O. spots on back	k. yellow eyes l. no spots on neck n. fangs o. no spots on back
Yellow Autosome	P. no spots on thigh Q. green body R. small comb on head [see ♂ below] S. [See ☞ below] T. [See ▶ below]	p. spots on thigh q. purple body r. large comb on head [see ♂ below]
Sex Chromosomes	U. regular thigh V. four toes W. no chest plate X. no tail spike Z. long arms + non-fire breather Y. male sex	u. pointed thigh v. three toes w. chest plate x. tail spike z. short arms - fire breather
X Chromosome Only		
Y chromosome only		

Codominant traits

* E. eye pointed at each end e. round eye Ee. eye round at front only
 ☞ S. Red spots s. yellow spots Ss. orange spots

Sex-influenced traits

† M. wings m. no wings [dominant in presence of male hormone]
 ▶ T. no elbow spike t. elbow spike [dominant in presence of male hormone]

Sex-limited traits

♂ R or r Only males have the comb on the head.

1. What is Mendel's Law of Segregation? ^{PAIRS}
HOMOLOGOUS ALLELES SEPERATE when gametes form

2. How does dropping the sticks and transcribing only 1 side of the stick model this law?
shows that each parent only passes on 1 of 2 ALLELES

3. What is Mendel's Principle of Independent Assortment?
ALLELE PAIRS for DIFFERENT GENES SEPERATE
INDIVIDUALLY @ GAMETE FORMATION

4. How does dropping the green, orange and red sticks illustrate this principle?
SHOW THAT TRAITS ON CHROMOSOME don't
AFFECT inheritance on other

5. The gene for fangs is recessive, yet most of the dragons have fangs. How can a recessive trait be so common?

REC. ALLELE FOR FANGS IS VERY COMMON IN POOL

5. What is a "sex-linked trait"?

TRAIT FOUND ON X-CHROMOSOME (OR Y)

6. Which traits are sex-linked? Refer to "Decoding the Dragon Genome."

X } - tail spike } - thigh shape
- fire-breath } - # toes
- arm length } - chest plate

7 a. What traits are *more likely* to be found in males? [Consider sex-linked, sex-influenced and sex-limited traits.]

- comb on head
- NO wings
- elbow spike
- tail spike
- short arms
- fire-breather

8 a. What traits are *more likely* to be found in females?

- wings
- no elbow spike
- no tail spike
- long arms
- non-fire-breather

