

Digestive enzymes – dominoes

l_rg_ _nt_st_n_	START: What is the general term for a biological catalyst?	_nzym_	What process, that happens in the gut, involves several of these?
d_g_st_ _n	Name the enzyme that digests starch.	_myl_s_	What product is formed when this enzyme catalyses a reaction?
gl_c_s_	Name the enzyme that digests protein.	pr_t_ _s_	What product is formed when this enzyme catalyses a reaction?
_m_n_ _c_ds	Name the enzyme that digests fats.	l_p_s_	How many products are formed when this enzyme acts?
tw_	What are the products formed when lipase catalyses a reaction?	f_tty _c_ds & glyc_r_l	Name the first place in the digestive system that amylase is made.
s_l_v_ry gl_nds	Where in the digestive system is protease first made?	st_m_ch	In which two locations in the digestive system is lipase produced?
p_ncr_ _s & sm_ll _nt_st_n_	Which two other enzymes are also produced in these locations?	_myl_s_ & pr_t_ _s_	Describe the conditions in the stomach.



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_c_d_c	Which food molecule is best digested in these conditions?	pr_t_n	Describe the conditions needed in the small intestine for digestive enzymes to work most effectively
_lk_l_n_	What substance is secreted into the small intestine to increase the pH?	b_l_	Where is this substance made?
l_v_r	After being made here, where is it stored?	g_ll bl_dd_r	Other than increasing the alkalinity of the food, what is its other function?
_m_ls_f_c_t_n _f f_ts	What effect does this have on the surface area of the fats?	_ncr_s_s	What reaction will occur at a faster rate?
f_ts → f_tty_c_ds & glyc_r_l	In which one location in the digestive system are food molecules absorbed into the blood?	sm_ll _nt_st_n_	Which four food molecules are absorbed here?
gl_c_s_, _m_n_ _c_dsl, glyc_r_l & f_tty_c_ds	Why can the original molecules (e.g. protein, starch) not be absorbed here?	th_y_r_ l_rg_ & _ns_l_bl_	What lines the walls of the small intestine?
v_ll_	Describe the surface area of these	v_ry l_rg_	By what process are food molecules absorbed across the wall of the villi?



d_ff_s__n	How many cells thick is the wall of each villus?	j_st__n_	Why is this important?
It f_rth_r__ncr__s_s th__d_ff_s__n_r_t_	What is found in the middle of each villus?	c_p_ll_ry n_tw_rk	Once all soluble food molecules are absorbed, where does the undigested food go to?



Teaching notes

This is a domino style activity about digestive enzymes and related concepts. There are 32 cards, allowing it to be used with a whole class. The activity could also be done individually, in pairs or in small groups to produce a complete ordered set of cards.

Students may be asked to start by working out the 'answer' (left side) on their card as all vowels are missing - this might be useful as a quick settling activity. The domino activity can then begin.

To allow for differentiation, some of the harder cards have been shaded red/pink, whereas the simpler ones are shaded green. To make it more challenging the gaps showing where the missing vowels are could be removed.

When attempting this activity, students should have already studied the digestive system (including the roles of the organs, the role of enzymes and bile and the adaptations of the small intestine).