



Modeling: Mantid Striking Distance Rates

STUDENT HANDOUT

There seems to be a relationship between how hungry a praying mantis (also called a “mantid”) is and the distance at which the praying mantis will strike (jump) at prey. Here are some data for 15 mantids presented in GAIMME (Guidelines for Assessment & Instruction in Mathematics Modeling Education) that can be explored to investigate this relationship. *Based on these data, can you find a function that predicts the distance a praying mantis will strike based on how much food is in its stomach?*

Food in stomach in centigrams (cg)	Striking distance in millimeters (mm)
11	65
18	52
23	44
31	42
35	34
40	23
53	23
59	8
66	4
70	0
72	0
75	0
86	0
90	0

The GAIMME report is available here:

http://www.siam.org/Portals/0/Publications/Reports/gaimme-full_color_for_online_viewing.pdf?ver=2018-03-19-115454-057