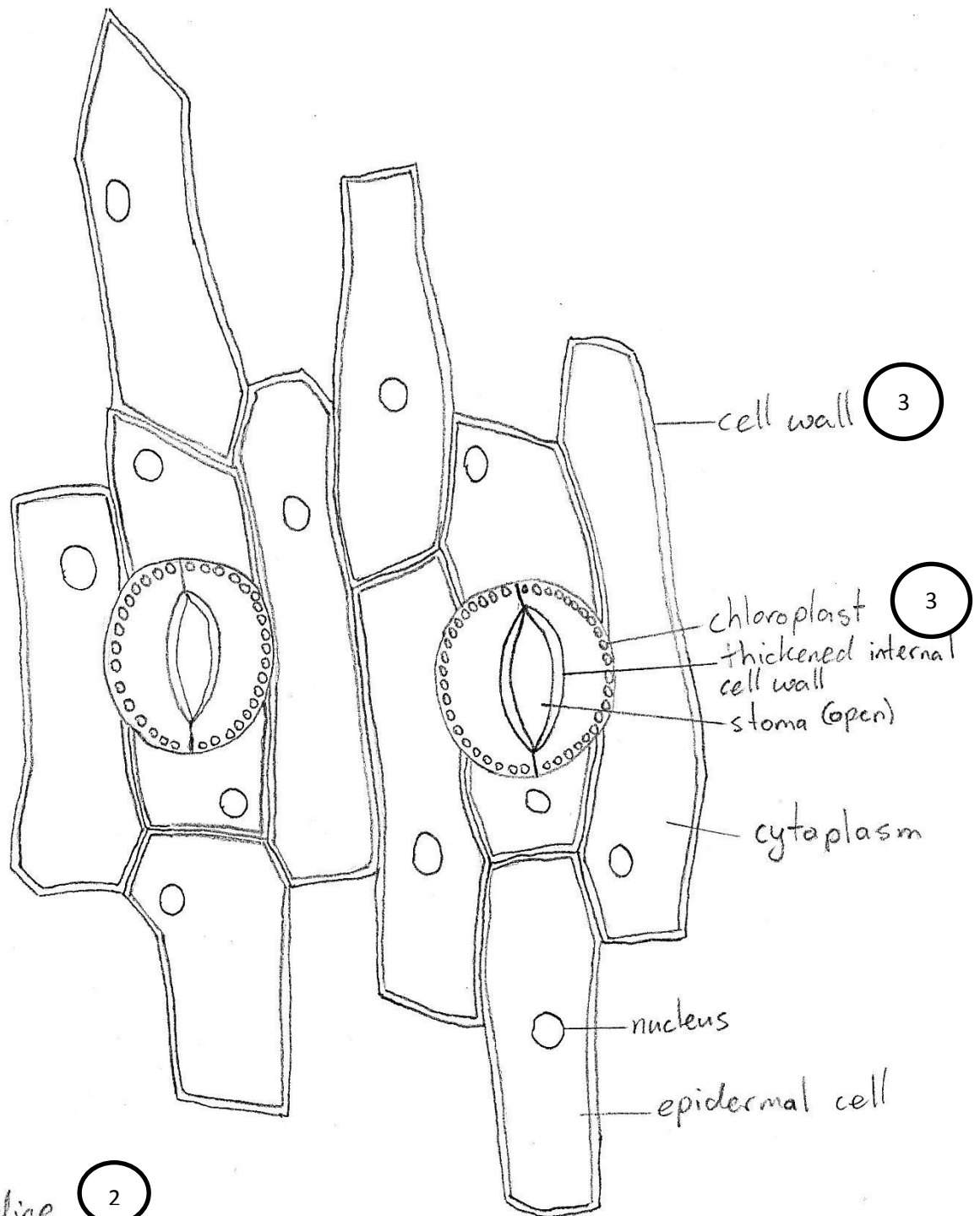


Please note – This is an extract from a student's response for one of three biological drawings

Tradescantia Epidermal Leaf Tear (1)



Stain: iodine (2)
magnification: x400

The lower epidermis leaf cells of Tradescantia (wandering jew) leaves help to regulate gases that enter and leave the leaf.

The stomata are pores found mostly on the lower surface to absorb carbon dioxide for photosynthesis in the palisade cells, and release oxygen. They are opened and closed by the action of the guard cells. 4

The guard cells are pairs of cells surrounding the stomata and control the opening and closing of the stomata for gas exchange in the leaf. They also regulate water loss, like in hot, dry conditions when they close to avoid wilting and allowing the cells to carry out photosynthesis to produce glucose for respiration. 4