

Build a Neuron Game

Aim: Players race against one another to build their own neuron.

What You Need:

Each player requires one set of neuron cards.

One die.

Rules:

Players take it in turns to roll the die in order to collect different cell parts for their neuron.

Players must roll a 1 to collect a cell body before they can start adding other components.

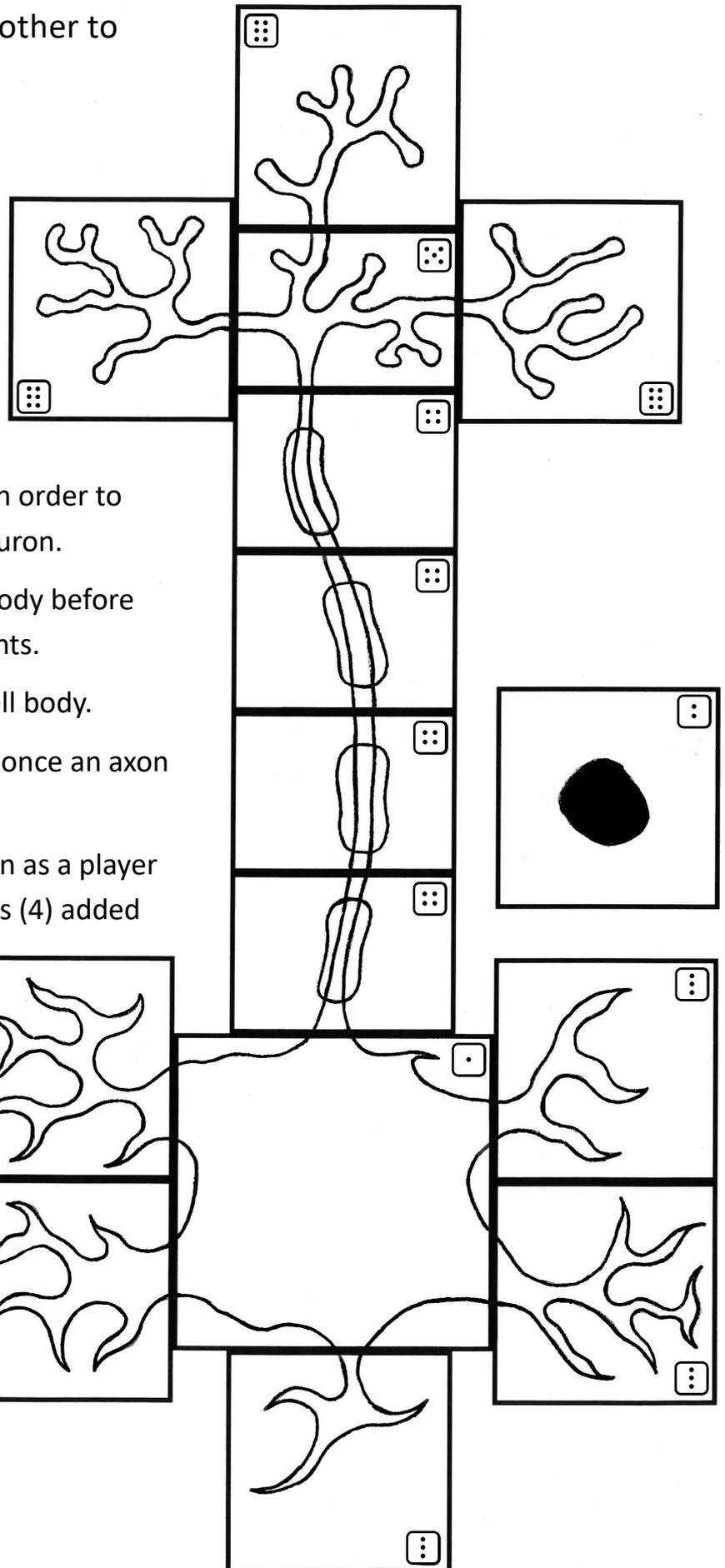
The nucleus (2) is placed inside the cell body.

Axon terminals (6) can only be added once an axon end (5) has been added.

The axon end (5) can be added as soon as a player has a cell body (1) with axon segments (4) added as they are collected.

The Winner:

The winner is the first player to successfully collect all of the parts to their neuron.



The Neuron and its Component Parts

Axon Terminals - converts the electro-chemical message from the axon into chemical neurotransmitters that are sent out to other neurons.

Myelin sheath - helps to speed up the transmission of messages along the axon by acting as an insulator.

Nodes of Ranvier - gaps between the myelin sheath that allow the flow of ions in and out of the axon.

Axon - sends electrochemical messages out from the cell body to other neurons.

Dendrites - receives chemical messages from the axons of other neurons.

Nucleus - contains the DNA of the cell. The DNA contains all the instructions on how to build the cell.

Cell body - the cell workhouse, receiving all inputs, sending messages, and producing components for the cell.

