



HUMAN NERVE CELLS

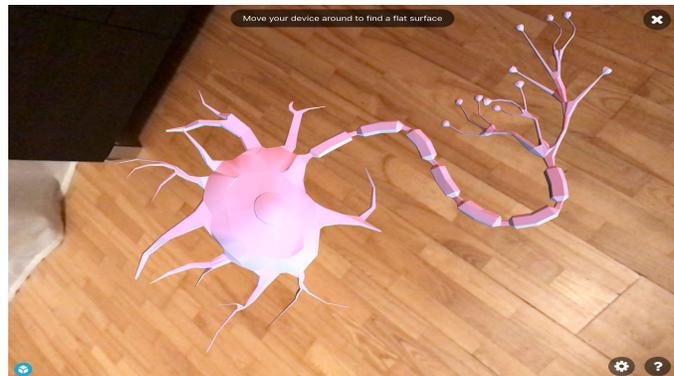
Student's worksheet

Names:

Class:

Aim: to associate the structure of a nerve cell to its functions.

Task - scan the following QR-code to open the model about a human nerve cell. Observe the structure of it and answer the questions.



Observe the model in augmented reality. To do that, you need to click on the

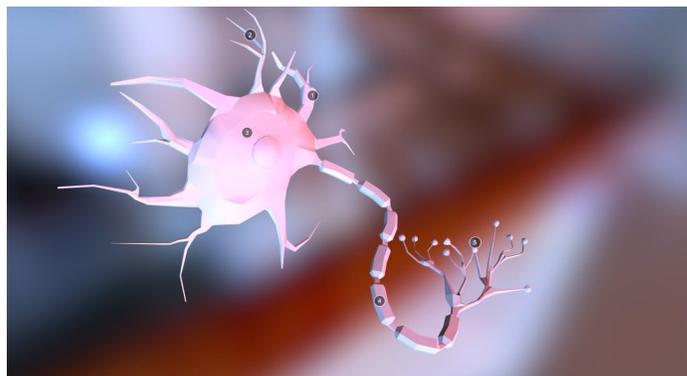


(Android devices) or



(Apple devices) button.

Open the same model in 3D in an another device - there you can read about the structure of the nerve cell.





Nerve cells are the primary components of the nervous system. The function of the nerve cells is to carry signals in human body.

1. How would you describe the structure of a nerve cell?

.....

2. Why do nerve cells have branches?

The central part of a nerve cell is a cell body, where processing the information takes place. Nerve cells have two types of branches - a long axon and shorter dendrites.

3. Observe the model and write down what are the functions of axon and dendrites.

Axon

Dendrites

4. Why do nerve cells form networks?

.....

5. How are the function and structure of a nerve cell associated?

.....

HUMAN NERVE CELLS

Teacher's worksheet

Aim: to associate the structure of a nerve cell to its functions.

Duration: 15 minutes.

Aim: to analyze the importance of alveoli and to explain respiration process.

Duration: 15-20 minutes.

Background information:

- 1) students must be divided into groups (3-4 members in each group);
- 2) Sketchfab app and a QR-code reader must be downloaded in the devices (Apple devices must use the camera to scan the QR-code, no additional QR-code reader needed).

Materials: printed student worksheets, devices (phones or tablets) - at least two devices and one worksheet for one group.

Task - students need to scan the following QR-code to open the model about a human nerve cell. They observe the structure of it and answer the questions.



Model:

<https://sketchfab.com/3d-models/neuron-for-psy150-d2a2dedec2f846cf9a04cb1969e40782>



They need to observe the model in augmented reality. To do that, they need to click on the



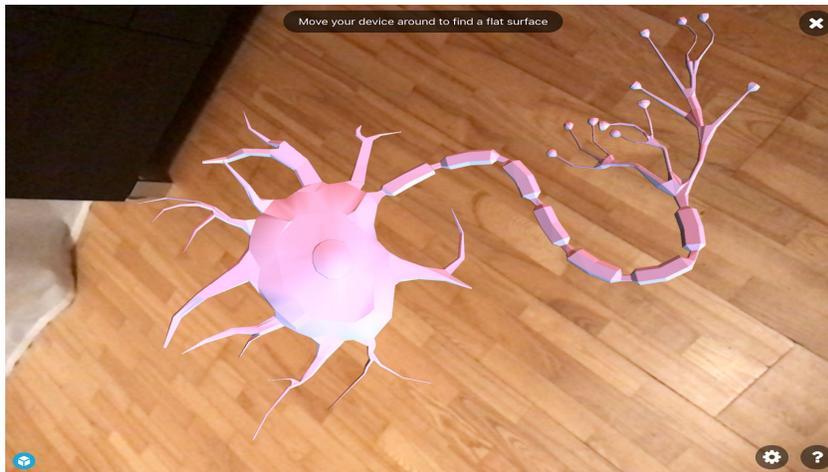
(Android devices) or



(Apple devices) button. If somehow the model does not open

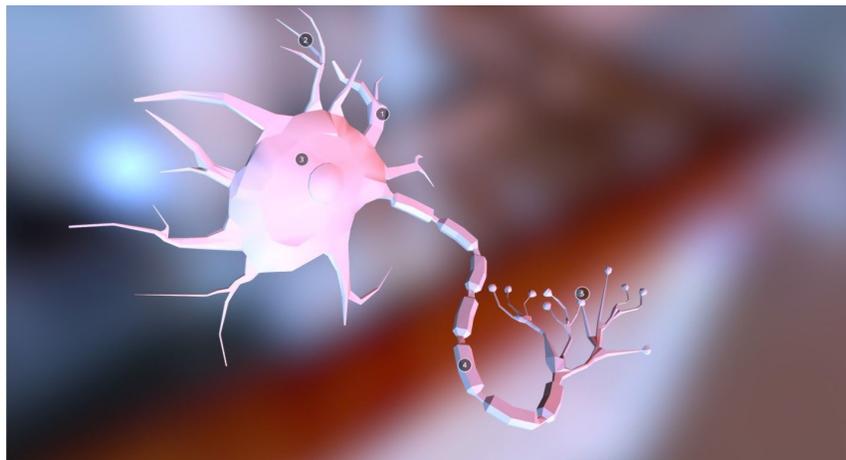
after clicking on the AR button, then they should click on the settings and turn off the shadows (“AR Flood Shadow”).

To open the model in an Apple device, camera must be used to scan the QR-code.



Model in augmented reality (AR)

Students need to open the same model in 3D in an another device - there they can read about the structure of the nerve cell.



Model in 3D

Text and tasks on student's worksheet:

Nerve cells are the primary components of the nervous system. The function of the nerve cells is to carry signals in human body.

1. How would you describe the structure of a nerve cell?

.....

2. Why do nerve cells have branches?

The central part of a nerve cell is a cell body, where processing the information takes place. Nerve cells have two types of branches - a long axon and shorter dendrites.

3. Observe the model and write down what are the functions of axon and dendrites.

Axon

Dendrites

4. Why do nerve cells form networks?

.....

5. How are the function and structure of a nerve cell associated?

.....

Possible answers:

1. A nerve cell consists of several parts - it has a body and long branches.

2. Nerve cells have branches to connect with other nerve cells in order to deliver signals.

3. Axon conducts electrical impulses away from the neuron's cell body. Dendrites conduct electrical messages to the neuron cell body.

4. Nerve cells form networks to send signals all over the body.