Neuroplasticity 1- How We Learn

Learning Intention

Students will understand the concept of neuroplasticity- that new learning is hard, but with practice and support, it eventually becomes automatic.

Australian Curriculum Link

Science: Biology
Critical and creative thinking capability: Reflecting on thinking and processes

Basic facts

When learning something new, the neurons in the brain fire and wire to create new neural pathways.

The first time a connection is made, is the most difficult. Each time we practise, this connection strengthens until the new skill, knowledge or behaviour becomes automatic.

Vocabulary

Please refer to the ThinkPlus Journey Glossary for definitions of the following vocabulary;

- Neural pathways
- Synapse
- Neuron
- Dendrite
- Axon terminal
- Neurotransmitter
- Neuroplasticity

Preparation

- Print SEE, THINK, WONDER charts
- Print individual See, Think, Wonder chart

You can decide how to use these- one per student, one per pair or group or one large copy of each chart to record class ideas following discussion.

ThinkPlus Resources

Neuroplasticity 1 How We Learn PPT

SEE, THINK, WONDER charts

Equipment

Pen / pencil per student
Personal device with internet access

Outline

This module follows the **Neuroplasticity 1 How We Learn** PowerPoint. Detailed teacher notes accompany each slide.

i. Begin workshop by introducing the video and discuss what an analogy is. Explain that students will be completing the thinking routine - SEE, THINK, WONDER following the viewing.
ii. Watch video.
iii. SEE- student record what they saw in video- objects, actions, surrounds etc. Discuss.
(Each part of the routine can be completed individually, in small groups or a large group with teacher recording student observations on the board. If carried out in small groups, have each group record on the chart then share with class.)
iv. THINK- Students use SEE list as a guide to their thinking about the video, the use of analogies and the message. Discuss.
v. WONDER – Students record what they wonder about the content and message of the video.
vi. Research- students choose a question from the WONDER chart and research it. Share findings with group.
vii. Watch video again. Ask students to think about anything else they could add to the SEE, THINK, WONDER charts.

Reflection

What did I learn from today?

How could this new understanding help me next time I face a new learning challenge?

Ideas

Use charts to create a class display.

Add any findings from the WONDER chart.

Highlight the wonderings that have not been resolved yet.