

Lesson Plan

NEUROHEADWAY

Neuroscience Into Education

Key Stage 2	Science/PSHE	
Lesson: Neuroscience and Fear		
Suggested Objectives: - To understand the biological and evolutionary reasons for the emotion of fear - To identify areas within the brain that are associated with the processing of fear emotion - To explore ways to manage fear - To reflect on ideas and make useful suggestions to help someone conquer their fears		
Suggested Success Criteria: I can explain why we have the emotion of fear I can identify parts of the brain which are associated with fear and say what their function is I can evaluate how fear can be real and imagined I can reflect on my experiences of fear to empathise with others I can explore and share ideas for conquering fear		
Resources: Neuroscience and Fear power point and resource pack, colouring pencils, access to the internet for children		
(This lesson outline is a suggested order of how to deliver the lesson. Additionally, the content within this lesson may take several sessions to ensure that children can immerse themselves in the content of the topic) • Activity 1 – children to create a picture of what fear looks like. • Watch animation and discuss • Activity 2 – children to use the internet to find out the definitions and location of the amygdala, hypothalamus, thalamus, hippocampus, and sensory cortex.		

- Activity 3 – Scenario. You may need to alter this activity if you feel that it is too sensitive for anyone in your class who is going through a similar experience.
- Activity 4 – Circle time. Establish the rules for circle time. A suggested book to share at the start is *Little Mouse's Big Book of Fears* by Emily Gravett. Read your chosen story and discuss. (suggested questions: How would you describe the main characters? Why did he/she feel...? How did it make the reader feel? How has the author created a feeling of fear? Was there anything in the story that you could relate to?). Allow children to share any experiences of fear if they wish to. Together, create a toolkit of ways that fear can be overcome. Finish the session by allowing children the opportunity to write any fears or worries that they have confidentially and have a class worry jar/box ready for them to place their worries inside. You may also wish to close circle time with a prayer or affirmation.
- Complete the lesson by giving children time to reflect on their new knowledge and share their thoughts on the Reflection Sheet.

Suggested activities to extend this lesson into a unit of work:

- English - Children's pictures of what fear looks like can be used as characters for story writing.
- History – How people have been controlled with fear throughout history. If studying WW2 for example, children can explore the question: How did Hitler control so many people through fear?
- PSHE/Science – Another useful Neuroscience resource to compliment this module is 'Neuroscience and Mindfulness'. There are mindfulness meditation activities within this module which may be useful.
- PE – Teambuilding activities. Children can be blindfolded and led by a peer on a pathway. This type of activity helps to build trust and to have faith.
- ICT – create part two of the animation to show how the main character finally overcame her fear.

Power point Example

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Activity 1: What does fear look like to you?

- If fear had physical features, what would it look like?
- What colours would it be?
- What would its face look like?
- Draw a detailed picture of what you imagine fear to look like
- Once your image is completed, be ready to share and discuss your ideas

Why We Fear

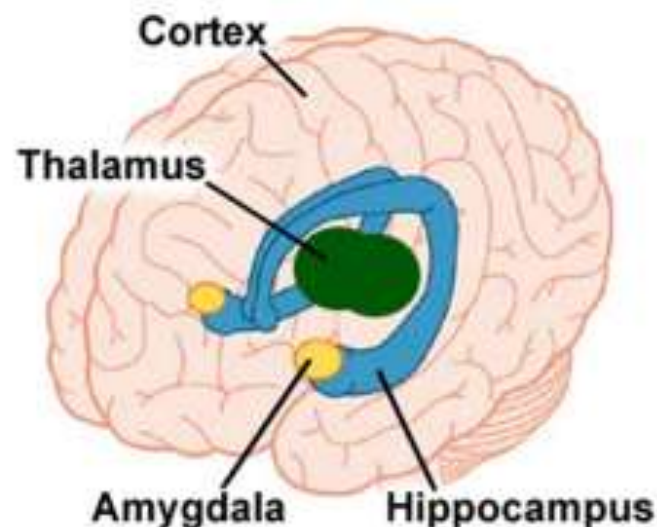
- Human beings need the emotion of fear for the purpose of our survival and evolution
- Fear is an unconscious action at its onset
- If we sense a real threat to our survival, our fear emotion allows us to take action
- For example, we can see a huge grizzly bear charging towards us. Immediately, our fight or flight kicks in and we take the appropriate action!



Activity 2: Fear in the Brain

- Your fight or flight response is activated in the reptilian part of the brain. Here, you will find the thalamus, hippocampus, hypothalamus and the amygdala.
- Rational thought processing occurs in your sensory cortex.
- Learn more about fear in the brain by completing Activity 1.
- Using the 'Fear in the Brain' worksheet, match the labels and definitions to the correct part of the brain diagram
- Use the internet to help you locate each part and identify its correct definition.

It is important to remember that there is still an awful lot not understood about the processes of fear in the brain, and there is a lot of research happening into understanding this emotion better.



Fear of Failure

When you fear failure, you tend to give up trying. You can tell yourself stories such as, "Why bother", or "What's the point, it won't work out anyway", or "nothing ever works out for me, so what's the point in trying".

What can you change these thoughts to, so that you can overcome fears of failure?

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Fear of Ridicule

We can sometimes become afraid of being laughed at, so we avoid certain situations.

For example, we may really want to take on a leading role in a school play, but we are too fearful of everybody laughing at us.

We may be afraid of sharing our ideas in class incase we are laughed at.

How can you face this fear?

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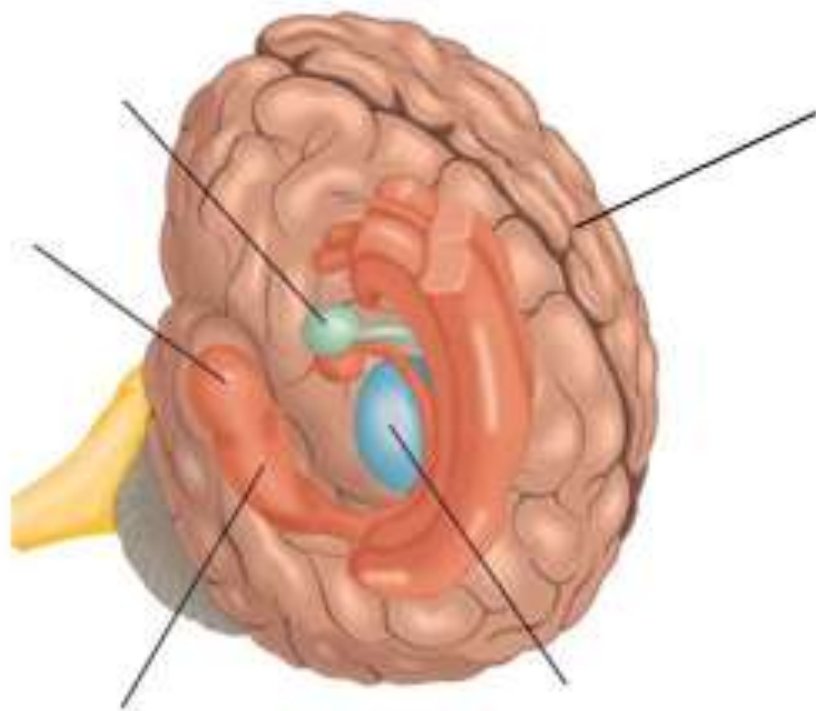
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Fear in the Brain

Match the correct name and definition. Cut each out and place them in the part of the diagram or write the label and definition instead.

Thalamus	Processes long term memories and emotional responses.
Amygdala	Sends information that comes in from our senses to the parts of the brain that oversee processing it.
Hypothalamus	Analyses the crisis and decides on how to respond to it based on the facts.
Hippocampus	Manages automated behaviours such as hunger and thirst. Also regulates many things including your breathing and temperature.
Sensory Cortex	Responds to emotions, particularly fear. Responsible for the memory of emotions.



Reflection

Use the space on this sheet to express your thoughts and feelings about your learning.

You may choose to express your reflections words, pictures, or both.

Make it as colourful as you wish!

