



11–18 yrs

Welcome to your awareness, prevention and fundraising pack from the Child Brain Injury Trust. The purpose of this pack is to provide you with an introduction to the charity and the work we are doing supporting children and young people with brain injury, and to offer some guidance and resources on how you can help prevent children in your school from putting themselves at risk.

What you'll find in this pack...

Pages 1-3: Introduction – Who are we

Page 4: Awareness – What is brain injury

Page 5: Case Study – Melissa's Story

Pages 6-7: Prevention – How to keep safe

Pages 8-10: Fundraising – How you can help

Pages 11-40: Resources – What's available

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Dear Friends,

We hope you find this pack informative and helpful. You'll find information about our services and how we support families and children, useful resources to use in school, and information on prevention and safety.

There is also lots of information about how your school can get involved in fundraising activities to support the charity. Fundraising can be a fun activity for children and adults, and it's a great way to teach children the importance of supporting charities and people in need in their own community. We can help you with practical advice and support to ensure your fundraising activities are fun and successful.

Who are we?

Established in 1991, we are a charity who helps children and their families to come to terms with what has happened and how to deal with the uncertainty that the future holds.

Brain injury has a devastating and life-long impact on the child and their whole family. Bones can mend and scars can heal but a brain injury stays with you for life and impacts on everything you think, feel and do.

What do we do?

The Child Brain Injury Trust helps children and their families to get the most out of life when a brain injury strikes. We offer:

- A network of dedicated support workers across the UK who support a child from the hospital stage, through their return home and into the future.
- A dedicated Helpline which provides expert advice when a parent needs it most
- The latest information to support children and their families is available via our website www.childbraininjurytrust.org.uk and also through an extensive range of publications that we have available.
- Events for children, families and professionals to attend, from conferences to family days out.
- Networking opportunities for parents through popular social media sites.
- Training for teachers and other professionals who are supporting a child in their return to the school setting.
- We raise awareness of the issues that children will face after suffering a brain injury.



Parents often say that the difficulties facing their child tend to get worse rather than better as the young person enters adolescence. This is largely due to the fact that the teenage years are when most people begin to fine-tune skills such as independence and the ability to plan their life. For a child with a brain injury, this can be incredibly difficult.

Why focus on children?

In adults, the greatest improvements after a brain injury generally occur within the first two years, but the story for children is very different as their brain takes roughly 20 years to fully develop. This means that depending on the age of the child it can take months and quite possibly years for the injury to become apparent as it is only when the injured part of the brain develops that the extent of the brain injury can be known.

How we are funded?

The charity currently spends around £1 million per year on delivering services to families and professionals. The majority of our funding comes from the hard work of our fundraising and training teams, staff, volunteers and supporters.

Get involved

Did you know we can provide specialised training to teachers and education staff when a pupil has acquired a brain injury? It helps them to make sure that they are ready to provide the child with the support they need to help them return to school after their injury.

If you would like someone to come to your school and talk to children, or staff, about childhood brain injury, or you would like to get involved in fundraising activities or choose us as your charity of the year, please get in touch.

Kind regards,

Claire Murray
Community Fundraiser

clairemurraycbtuk.org



Brain injury in children

The brain is the most complex organ in the human body. It controls movement, thoughts, feelings, behaviour, memory, speech, sight, hearing and other senses.

A child's brain can get injured as a result of an accident (car accidents are a common cause) or illnesses such as meningitis or encephalitis, or from poisoning, a stroke or a brain tumour.

In adults the effects of brain injury generally show soon after the event, but for children it can be very different - it can take months or years for the injury to become obvious. There are two reasons why it may take longer for the effects to show in children:

It is only when the injured part of the brain develops fully that the extent of a brain injury can be known – brain development continues throughout childhood and adolescence.

Teenage years are when most young people use experiences to begin to fine-tune skills such as independence and the ability to plan their life. For young people with an acquired brain injury, difficulties in these areas can become obvious during this time.

A brain injury affects every individual differently, but common effects include:

Physical

Tiredness and fatigue

Doing things at a slower pace

Thinking

Taking longer to process information

Difficulties concentrating, being easily distracted

Forgetfulness, particularly in relation to new information and recent events

Following verbal instructions

Organising and planning

Emotions

Depression

Anxiety

Fear

Obsessiveness

Behaviours

Acting on impulse, without thinking through the consequences

Immaturity

Aggression

Sexually inappropriate behaviour



Each individual with a brain injury may have a different combination of symptoms from the list above. These difficulties are likely to have a significant effect on daily life and education. It is important that everyone who works with a child with a brain injury understands these effects and recognises that the issues are linked, and can develop or lessen over time.



Melissa's Story

"Two years ago my world was turned upside down, when I was knocked down by a car coming home from school. I was in hospital in a coma, and I had suffered 5 bleeds on the brain which led to me being left with a brain injury.



My mum and dad were told to say their goodbyes that day, there was little hope. But I am a fighter. I came out of the coma and all we could do was wait and see if I would fully recover. Anybody that knows me is well aware that I like to talk. I just couldn't imagine how I would be not being able to chat. Quickly I began to walk, talk, and feed myself. It was like a miracle. Mum and Dad were getting their little girl back."

When she was discharged from hospital, the Child Brain Injury Trust became involved, giving support to Melissa and the family, "We did not acknowledge the support at the beginning as we believed Melissa was fine and we would just get on with it all".

Gradually, issues started to arise at school and Melissa was becoming so unhappy and lonely. This broke her mum and dad's heart. She was aware that she was different from before the accident. This was the stage that they realised that they needed help and support.

"The Child Brain Injury Trust has helped us and the school to recognise Melissa's needs. Their specialist staff go into schools and train teachers and work with other children to give them a better understanding. They also have awareness days for professionals and will be involved with Melissa all through school".

The staff at the Child Brain Injury Trust have been a valuable support and continue to be. Melissa had also gone through early puberty as a result of the brain injury and the charity supported her parents to support her with this in a child-friendly way. They have now accepted that they will not know the final outcome until she is 21."

Case Study



Preventing brain injuries in children

Many head injuries are the result of accidents that are very difficult to predict or avoid. Although no child is injury proof, parents and carers can take some simple steps to keep children from getting head injuries. Follow these tips to reduce the risk of brain injury:

Safety in the home

- Keep all medicines and dangerous chemicals well out of children's reach, preferably locked up
- Check windows are lockable and cannot be opened by a child, especially bedroom windows
- Use a nonslip mat in the bathtub or shower
- Make sure rugs are secure and clean up spillages to prevent someone slipping
- Don't let children play on fire escapes or balconies

Road and car safety

Road traffic accidents are the biggest cause of death and disability among young people in the UK. The injuries that children receive can be really severe and include being paralysed or brain damaged for life. Many of the young people who are involved in these situations are needlessly injured, as they could have avoided. They often involve accidents in cars, on scooters and motorbikes, as well as on bicycles or pedestrians on foot.

Young people can easily be put under pressure from friends to accept a lift with a young driver who has been drinking alcohol or taking illegal drugs. These drivers are more likely to drive too fast, talk on a phone while driving, take stupid risks and ultimately are far more likely to be involved in an accident. It doesn't matter who the driver is, they might be a good friend, boyfriend or girlfriend or someone you've just met. Never accept a lift under these circumstances, your safety must come first.

Always wear a seat belt whilst travelling in a motor vehicle. Children should always sit in the back seat.

Alcohol and drug awareness

22% of 11-15 year olds have taken illegal substances in their lifetime, and every year nearly 5,000 young people in England are admitted to hospital because of alcohol. Drinking alcohol can sometimes lead to addiction, which can have devastating effects such as liver damage. Young people who have consumed alcohol or taken drugs are far more likely to take risks that may result in serious injury, such as climbing buildings, crossing railway lines or getting into fights.

Be pro-active in talking to children about the dangers of drugs and alcohol. There is no evidence that talking about drugs or alcohol encourages children to take them.



Playground safety

Make sure playground surfaces are safe. Use playgrounds that have shock-absorbing materials on the ground. They should be made of shock-absorbing material, such as wood mulch or sand. Always take care and supervise children when playing on trampolines, and make sure they have a safety net around them.

Building site safety

Building sites have long been a place of fascination for young people and children, especially boys. They can be seen as a fun place to explore and play, however they are places that are full of dangers. Many children are injured, and several die each year as a result of accidents on building sites. ROSPA has safety information packs available that specifically aim to raise awareness of the dangers of construction sites amongst teachers, pupils and the wider community. They're available here: <http://www.rospa.com/>

Safety helmets

Whether cycling, horse riding, skiing, climbing or playing contact sports, the risk of head injury is always there. One indisputable fact is that wearing protective helmets helps to prevent head injuries, and saves lives. Children, and adults, should always wear an appropriate helmet for the sporting or leisure activity they are taking part in.

Nowadays they are a relatively cheap item to buy, and are widely available. One important thing to remember is to ensure that a helmet fits properly. Your local sports or bike shop will be able to help make certain the helmet fits properly.

You can even buy a cycle helmet from the Child Brain Injury Trust! We have teamed up with a helmet manufacturer to offer some really good quality helmets, at a discounted price available via our Ebay shop: <http://www.ebay.co.uk/egw/ebay-for-charity/charity-profile/Child-Brain-Injury-Trust/19643>

Sources:

<http://www.rospa.com/childsafety/>
<http://www.brake.org.uk/info-resources/info-research/advice/21-facts-a-resources/resources/322-youngpeople>
<http://www.mayoclinic.com/health/traumatic-brain-injury/DS00552/DSECTION=prevention>
<http://www.nlm.nih.gov/medlineplus/ency/patientinstructions/000130.htm>
<http://www.nhs.uk/Conditions/Head-injury-severe-/Pages/Prevention.aspx>
http://safe.met.police.uk/drugs_and_alcohol/get_the_facts.html
http://www.bbc.co.uk/schools/parents/keeping_your_child_safe/



Some inspiration and ideas for you and the children to get fundraising

We've come up with a selection of fun ideas for how you and the children can get involved with some fundraising. There's one suggestion for each of the school terms, each appropriate to the season. Don't be limited by these few ideas though, use your imagination and ask the children what they want to do. Fundraising activities can be a valuable learning opportunity for children, and of course great fun!

Term 1: The £10 Challenge



Over a couple of weeks, each member of the class/year is challenged to raise just £10.00. They can simply ask friends and family to make donations, they can do a sponsored activity (5 hour silence, 24 hours without TV/chocolate, swimming 40 lengths etc) or they could do odd-jobs for family and neighbours (washing cars, collecting leaves, etc).

Term 2: Road Safety Poster Competition

As winter nights draw in and the clocks go back, why not challenge the children to think about road safety and design a safety poster. Get them thinking about key elements of keeping safe, such as lights, reflective clothing and cycle helmets. You could encourage children to come to school dressed as brightly as possible and have a safety quiz using the highway code.



Term 2: Christmas Craft Sale

Get the children into the Christmas spirit by having arts and crafts sessions with a Christmas theme. Get all of the children making Christmas decorations, cards and gifts and then hold a big Christmas sale at the end of term. Tree decorations, crackers, Christmas cards and thank you cards are easy to make, and easy to sell! This is something the whole school can get involved in.

Term 3: All Day Cycle Challenge



Set up an exercise bike somewhere in the school and challenge children and staff to ride for a whole school day. You could even set up two bikes and challenge the children to race against staff to see who can clock up the most miles throughout the day. Participants can either pay to have a turn on the bike, or get sponsorship from their friends and families.

Term 4: Make a Money Box

Ask the children to bring in small boxes or tubs from home (Hob Nob tubes are good!) Stick them shut and cut a slit in the top. Get them to decorate them, or send them home as an activity for them to do over half term and the parents to fill with change. Ask them all to return them to school by a specified date.





Term 5: Brain Injury Awareness Week



In May each year we spend a week promoting awareness of brain injury, talking about prevention, safety, and organising challenges to raise funds to support our projects across the country. Why not try to challenge your School to do a different event each day? You could start with a sponsored silence on Monday and work your way up to a fancy dress party day on Friday where all children pay £1 to take part. We can help you get involved with exciting events that we will be organising, so get in touch if you want to talk about how you can get involved with this exciting week of fundraising and fun.

Term 6: Cycle to School

Why not encourage as many children as possible to cycle to school on a particular date? They can ask parents and families to sponsor them. If they don't have a bike they could walk to school. Just make sure that everyone who is cycling is wearing a cycle safety helmet!



Term 6: Take on the teachers

Get fit while you fundraise with a kids-against-teachers sports match. How about a massive 5-a-side football tournament, or lunchtime Olympics? You could organise a whole school fun run at the end of term for all children and teachers, with prizes for the top 3 runners from each team.

Here's a few more ideas you might like to try:

1. **Space hoppers** - organise a fun run with a twist – you have to complete the course on a space-hopper, on piggy-back or jumping in a sack.
2. **Dance off** - have a school disco – who throws the best moves on the dancefloor?
3. **Star makers** - put on a talent show and ask for donations. You might discover the next big star.
4. **Hula-hoops** - get sponsored for a hula-hooping session, and compete to see who can keep it spinning for the longest.
5. **Music makers** - have your school orchestra, choir or music clubs come together and attempt a sponsored music-athon.
6. **Start a business** - Are you the next Lord Sugar? See if you can rise to the challenge and become a charity apprentice.
7. **Sshh!** - have a sponsored silence day – for the whole class. Can you get through the whole day without speaking?
8. **Writing** - Each class could be sponsored to make up and write a poem, essay or mini book.
9. **Second hand uniform sale** - Ask parents to donate all their children's outgrown uniform and organise a regular sale time—this helps keep uniform costs down for parents as well as raising money.
10. **Obstacle course** - Create an exciting obstacle course in the playground or school field which children can be sponsored to take part in—maybe have a winner per class with a small prize.



Whole School Event Idea:

Penny Drive / Mile of Pennies

Why not try and get the whole school involved in one event for a day? Ask all children in the School to bring in coppers and loose change from home, get them looking down the back of sofa's and in their parents cars! It's always a great competition between classes to see who brings the most. You can give a small gift (sweets etc) to the winning class.



Why not get together and line all the coins up in the playground or sports hall at lunchtime and see how far they stretch? Can you make a mile of pennies?

This activity can be educational as well as fun. There's a whole range of maths activities you can explore around the event. Perhaps you can make it into an art event too? You could use all of the pennies and coppers to make a huge picture on the floor.



Fundraising



Resources

The Child Brain Injury Trust has developed a series of Peer Awareness Resources to cover eight areas of the National Curriculum (English, Science, Art and Design, Music, ICT, Citizenship, PHSE, Modern Foreign Language) across different ages. The reference chart below outlines which activities are most suitable for each age range, and what part of the National Curriculum they relate to. It is up to you which activities you want to use.

Activity Reference Chart

Activity Reference	Activity Name	Curriculum Area	Activity Type	Age Range
BB01	Brain Model	Art and Design	Practical	7-14 yrs
BB02	Thinking Cap	Art and Design	Practical	7-14 yrs
BB03	Jelly Brain	Science	Practical	5-14 yrs
BB04	Brain Connections	Science	Practical	7-14yrs
BB05	Shake Up Your Brain	Science	Practical	7-14 yrs
BB06	Emotions	PHSE/English/ Art and Design	Practical	7-14 yrs
BB07	Say What You See	Science	Practical	7-16 yrs
BB08	Brain Hieroglyphics	English	Worksheet	11-16 yrs



Activity Reference Chart

Activity Reference	Activity Name	Curriculum Area	Activity Type	Age Range
BB09	Drug Abuse Crossword	PHSE	Practical	11-16 yrs
BB011	Show You Care	PHSE/English	Practical	11-16 yrs
BB012	Brain Safety Brochure	Art and Design	Practical and Written	7-14 yrs
BB016	Brain Wordsearch	English	Practical	7-14 yrs
BB017	Brain Car Sticker	Art and Design	Practical	5-14 yrs
BB018	Brain CV	English/Science	Written	11-16 yrs
BB021	Compare and Contrast	English/ICT	Interactive	11-16 yrs
BB022	Brain Language	Languages	Practical and Written	11-16 yrs

The Information Standard quality mark

The Child Brain Injury Trust is a certified member of The Information Standard. As such, any information we produce has been assessed by our professional reference group and is subject to regular review.

The Child Brain Injury Trust shall hold responsibility for the accuracy of the information they publish and neither the scheme operator nor the scheme owner shall have any responsibility whatsoever for costs losses or direct or indirect damages or costs arising from inaccuracy of information or omissions in information published on behalf of Child Brain Injury Trust.



Curriculum Area	Art & Design	Activity Type	Practical
Suitable for	7-14 yrs	Activity Number	BB01
Activity Name	Brain Model		

Learning Outcome:

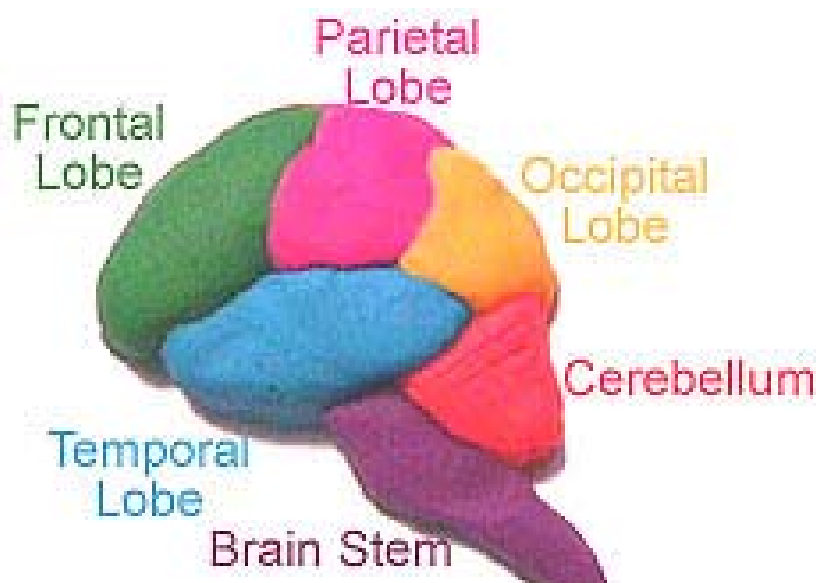
To understand that the brain consists of different areas that are used for different purposes, and to know what the brain structure looks like.

Materials Required:

Clay
Playdough

Instructions:

Create a whole brain or use a brain atlas and create cross-sections of the brain at different levels. Use different colors to indicate different structures.



Additional discussion:

1. Do all the parts do the same thing?
2. What do the different parts do?
3. What would happen if only one part was damaged? Would the other parts still work?
4. Which part of the brain is most likely to get damaged? Why?

What can we do to protect the brain from getting damaged? (Link to activity BB05 Shake up Your Brain, BB014 Design a Helmet, BB015 Head Protection)

Curriculum Area	Art & Design	Activity Type	Practical
Suitable for	7-14 yrs	Activity Number	BB02
Activity Name	Thinking Cap		



Diagram above and activity courtesy of Dr Eric H.Chudler - University of Washington, USA

Learning Outcome:

Understand that the brain consists of different areas that are used for different purposes, and what it looks like.

Materials Required:

- Balloons or chicken wire
- Paste
- Newspapers
- Paints

Instructions:

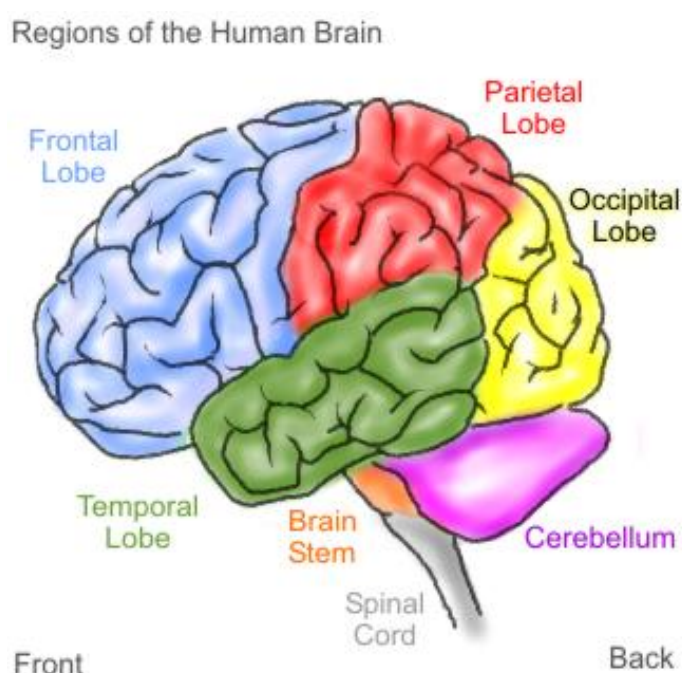
First, create the brain shape for the cap. You can create a shape from wire (e.g., chicken wire) or a balloon or use a bowl to build your cap around. You could even roll up some newspaper and cover it with masking tape. The form should have the approximate size and shape of your head so you can wear it.

Create the Structure:

Cut strips of newspaper and glue them to the form using papier-mâché paste. Coat the newspaper strips with the paste, and place them on the form. Let each newspaper layer dry before you add a new layer. Add enough layers to give you a strong structure. When the structure is dry, remove the underlying form. You may have to cut the edges of the structure and repair the sides for a good fit on your head.

Curriculum Area	Art & Design	Activity Type	Practical
Suitable for	7-14 yrs	Activity Number	BB02
Activity Name	Thinking Cap		

Paint the dried cap using the diagram on the previous page. Also refer to Information below for an explanation of the different areas of the brain.



Additional discussion:

1. Do all the parts do the same thing?
2. What do the different parts do?
3. What would happen if only one part was damaged? Would the other parts still work?
4. Which part of the brain is most likely to get damaged? Why?
5. What can we do to protect the brain from getting damaged?
(Link to activity BB05 Shake up Your Brain, BB014 Design a Helmet, BB015 Head Protection)

Curriculum Area	Science	Activity Type	Practical
Suitable for	5-14 yrs	Activity Number	BB03
Activity Name	Jelly Brain		

Learning Outcome:

To understand what the brain looks and feels like, how delicate it is, and how easily it could get damaged.

Materials Required:

- 2 packs of blackcurrant jelly
- Tin of condensed milk
- ½ pack of part-cooked spaghetti (optional)
- Aluminum foil
- Large plastic bowl



Instructions:

This activity could be given to children to try at home then bring back to class. Alternatively, it would make an interesting demonstration or 'join in' activity in class/group.

Make the Mould

- Shape the tinfoil into a rough brain shape and put it into your mixing bowl
- Arrange some part-cooked spaghetti in the base and sides of the mould (this will give the jelly a wrinkly look, just like the appearance of the cerebral cortex, the outer part of the brain)

Make the Jelly

- Make the jelly according to the instructions on the packet, but replace four tablespoons of water with four tablespoons of condensed milk (this will hopefully give the jelly an opaque, grey brain colour)
- Put the jelly into the fridge to set.
- Once set remove from the mould and discard the spaghetti strands.

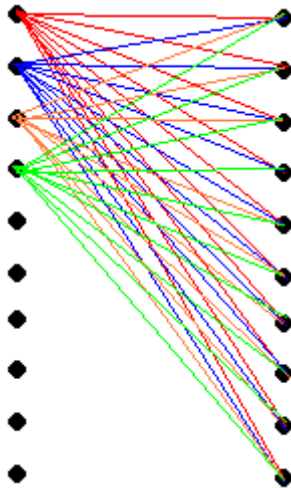
The finished jelly brain will roughly resemble the texture and colour of a human brain.

Additional discussion:

1. The brain is very squidgy – if it was knocked what do you think would happen?
What can we do to protect the brain from getting damaged? (Link to activity BB014 Design a Helmet and BB015 Head Protection)



Curriculum Area	Science	Activity Type	Practical
Suitable for	7-14 yrs	Activity Number	BB04
Activity Name	Brain Connections		



Learning Outcome:

To illustrate the complexity of the connections of the brain

Materials Required:

- Colored pencils or crayons
- Card with 10 dots on each side

Instructions:

Draw 10 dots on one side of a piece of paper and 10 dots on the opposite side of the paper as shown above.

Assume these dots represent neurons (brain cells), and assume that each neuron makes connections with the 10 dots on the other side of the paper. Then connect each dot on one side with the 10 dots on the other side. As you can see from the diagram above, it gets very complicated after a while. This example has only connected 4 of the "neurons".

Remember that this is quite a simplification. Each neuron (dot) may actually make *thousands* of connections with other neurons. If you tried this your paper would be really messy!!

Additional discussion:

1. What would happen if one of the dots was not there (the connections got damaged)?
2. How could this affect the way you think and feel and learn about new things?
3. How would it affect you trying to do ordinary things, like getting ready for school?
4. If you knew someone who had injured the connections in their brain, what ways could you help them?



Curriculum Area	Science	Activity Type	Practical
Suitable for	7-16 yrs	Activity Number	BB05
Activity Name	Shake up your Brain		

Learning Outcome:

To understand how the brain is protected from sudden impact, and the way in which various situations can damage a brain.

Materials Required:

- 1) Eggs (at least 2)
- 2) Markers to draw on a face (waterproof)
- 3) Plastic container with top
- 4) Water (to fill the container)

Instructions:

The cerebrospinal fluid (CSF) has several functions. One of these functions is to protect the brain from sudden impacts. To demonstrate how this works, we need to bring in "Mr. Egghead." Mr. Egghead is a **raw egg** in its shell with drawn-on face. The inside of the egg represents the brain and the egg shell represents the pia mater (the inner most layer of the meninges or coverings of the brain). Put Mr. Egghead in a container (Tupperware works fine) that is a bit larger than the egg.

The container represents the skull. Now put a tight top on the container and shake it. You should observe that shaking the "brain" (the egg) in this situation results in "damage" (a broken egg). Now repeat this experiment with a new Mr. Egghead, except this time, fill the container with water. The water represents the cerebrospinal fluid. Note that shaking the container does not cause the "brain damage" as before because the fluid has cushioned the brain from injury.

You could make this into a science experiment: test the hypothesis that "The cerebrospinal fluid and skull protect the brain from impact injury."

Drop Mr. Egghead from a standard height (or heights) in different conditions:

- 1) With fluid in the container
- 2) Without fluid in the container
- 3) With different fluids or materials (sand, rocks)
- 4) In different shaped containers, etc.

Make sure pupils keep notes to record their observations using a chart.

Additional discussion:

1. How did the different containers etc affect the damage to the egg?
2. Does our brain wobble about in any liquid? (Link to BB03 Jelly Brain)
3. What do we have naturally to protect our own brains?
4. What can we do to stop our brains being damaged? *Being careful, helmets on bike, seat belts in cars etc* (Link to BB012 Brain Safety Brochure, BB014 Design a Helmet, BB015 Head Protection)



Curriculum Area	PHSE, English	Activity Type	Practical
Suitable for	7-16 yrs	Activity Number	BB06
Activity Name	Emotions		

Activity courtesy of Dr Eric H. Chudler - University of Washington, USA

Learning Outcome:

To understand that our brain is responsible for how we feel and the emotions we have.

Materials Required:

- Magazines with pictures of people
- Scissors
- Glue
- Paper or poster board

Instructions:

How many emotions do you have? Happy, sad, mad, surprised? Make an "Emotion Collage" by cutting out magazine pictures of people expressing different emotions. Glue the pictures on a piece of paper or make a poster to show the different emotions. You could make separate papers or posters of different emotions.

Additional discussion:

Refer to Resource Information pack:

Which part of the brain is responsible for our emotions?

What do you think would happen if we damaged this part of our brain?

How would we behave?

If someone you knew damaged this part of their brain, how could this affect your friendship?

What could you do to help your friend?



Curriculum Area	Science	Activity Type	Interactive
Suitable for	7-16yrs	Activity Number	BB07
Activity Name	Say what you see—on the tip of my tongue		

Learning Outcome:

This activity will give pupils an understanding of the difficulties that a person with a brain injury may have in trying to say what they are thinking and the difficulties they may have in processing language. It is often referred to as the 'Stroop Effect'. There are a number of theories behind it, but it demonstrates that even though you might know what you want to say, it can be difficult to find the right words!

The third part of this activity will also demonstrate to pupils how difficult it can be for some people with an acquired brain injury to write something.

For a full explanation of the "Stroop Effect" see http://en.wikipedia.org/wiki/Stroop_effect

Materials Required:

Colored copies of the two sets of words (BB07 Cards)

Instructions:

This activity has 3 parts. Steps 1 and 2 are part of an activity devised by J Ridley Stroop (1935).

STEP 1:

Ask pupils to read out the colour of the words written on Card A (shown below). Say the colours as fast as they can.

RED	GREEN	BLUE	YELLOW	PINK
ORANGE	BLUE	GREEN	BLUE	WHITE
GREEN	YELLOW	ORANGE	BLUE	WHITE
BROWN	RED	BLUE	YELLOW	GREEN
PINK	YELLOW	GREEN	BLUE	RED



Curriculum Area	Science	Activity Type	Interactive
Suitable for	7-16 yrs	Activity Number	BB07
Activity Name	Say what you see—on the tip of my tongue		

STEP 2:

Once again, pupils should read out the **colours** of the words on Card B (shown below). Say the colours as fast as they can..... it's not as easy this time around!

RED	GREEN	BLUE	YELLOW	PINK
ORANGE	BLUE	GREEN	BLUE	WHITE
GREEN	YELLOW	ORANGE	BLUE	WHITE
BROWN	RED	BLUE	YELLOW	GREEN
PINK	YELLOW	GREEN	BLUE	RED

STEP 3:

Writing our name is something we do in school a lot... But what if the task became one that was easier said than done?

- On a piece of scrap paper, sign or write your name.
- Now try signing your name whilst moving your left foot in an anti-clockwise direction.

Additional discussion:

- How difficult was it to say the colours and not the word?
- How difficult was it to write your name when you had to move your foot as well?
- Why was it so difficult?
- This is what it is like for people who have injured their brains – what other difficulties do you think they may have because they can not say or write what they are thinking?
If you knew someone who had difficulty like this , how could you help them?

Learning Resources

Say what you see

Card A

Read out the **COLOUR** of the words written below.

Say the colours as fast as you can.

RED

GREEN

BLUE

YELLOW

PINK

ORANGE

BLUE

GREEN

BLUE

WHITE

GREEN

YELLOW

ORANGE

BLUE

WHITE

BROWN

RED

BLUE

YELLOW

GREEN

PINK

YELLOW

GREEN

BLUE

RED

Learning Resources

Say what you see

Card B

Now read out the **COLOUR** of each of the words written below.
Say the colours as fast as you can. (It's not as easy this time!)

RED	GREEN	BLUE	YELLOW	PINK
ORANGE	BLUE	GREEN	BLUE	WHITE
GREEN	YELLOW	ORANGE	BLUE	WHITE
BROWN	RED	BLUE	YELLOW	GREEN
PINK	YELLOW	GREEN	BLUE	RED



Curriculum Area	English	Activity Type	Worksheet
Suitable for	11-16 yrs	Activity Number	BB08
Activity Name	Brain Hieroglyphics		

Learning Outcome:

Understand a number of words used when discussing the brain.

Materials Required:

Worksheet shown on following page.

Instructions:

Copy as many of sheet 2 as required.

Answers:

- | | | |
|----|---------------------------------|---------------|
| 1. | Brain | b+rain |
| 2. | White Matter | |
| 3. | Grey matter | |
| 4. | Brain Wave | b+rain+wave |
| 5. | Long term and short term memory | |
| 6. | Hippocampus | hippo+camp+us |

This activity can be further extended by asking students to make up more hieroglyphics of words associated with the brain.



This symbol is the actual ancient Egyptian hieroglyphics for the word "Brain".

However, you don't have to worry about reading ancient Egyptian for the puzzles on this page. Your job here is to "read" the pictures to make a single word or phrase. Each word or phrase has something to do with the brain.

Read the pictures and then write the word or phrase next to it.



1) _____



2) _____



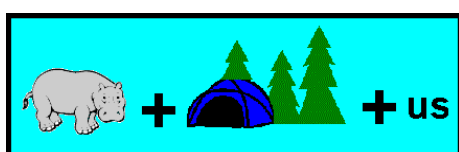
3) _____



4) _____



5) _____



6) _____

Curriculum Area	PHSE	Activity Type	Worksheet
Suitable for	11-16 yrs	Activity Number	BB09
Activity Name	Drug Abuse Crossword		

Learning Outcome:

To highlight the fact that drug and alcohol abuse can lead to brain injury.

Materials Required:

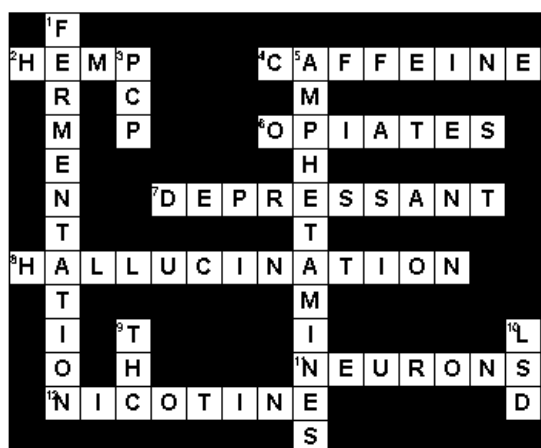
Copies of crossword on following page.

Instructions:

Discuss with students the issues relating to drug (and alcohol) abuse. Some additional key facts are detailed below. Finish the activity by asking them to complete crossword.

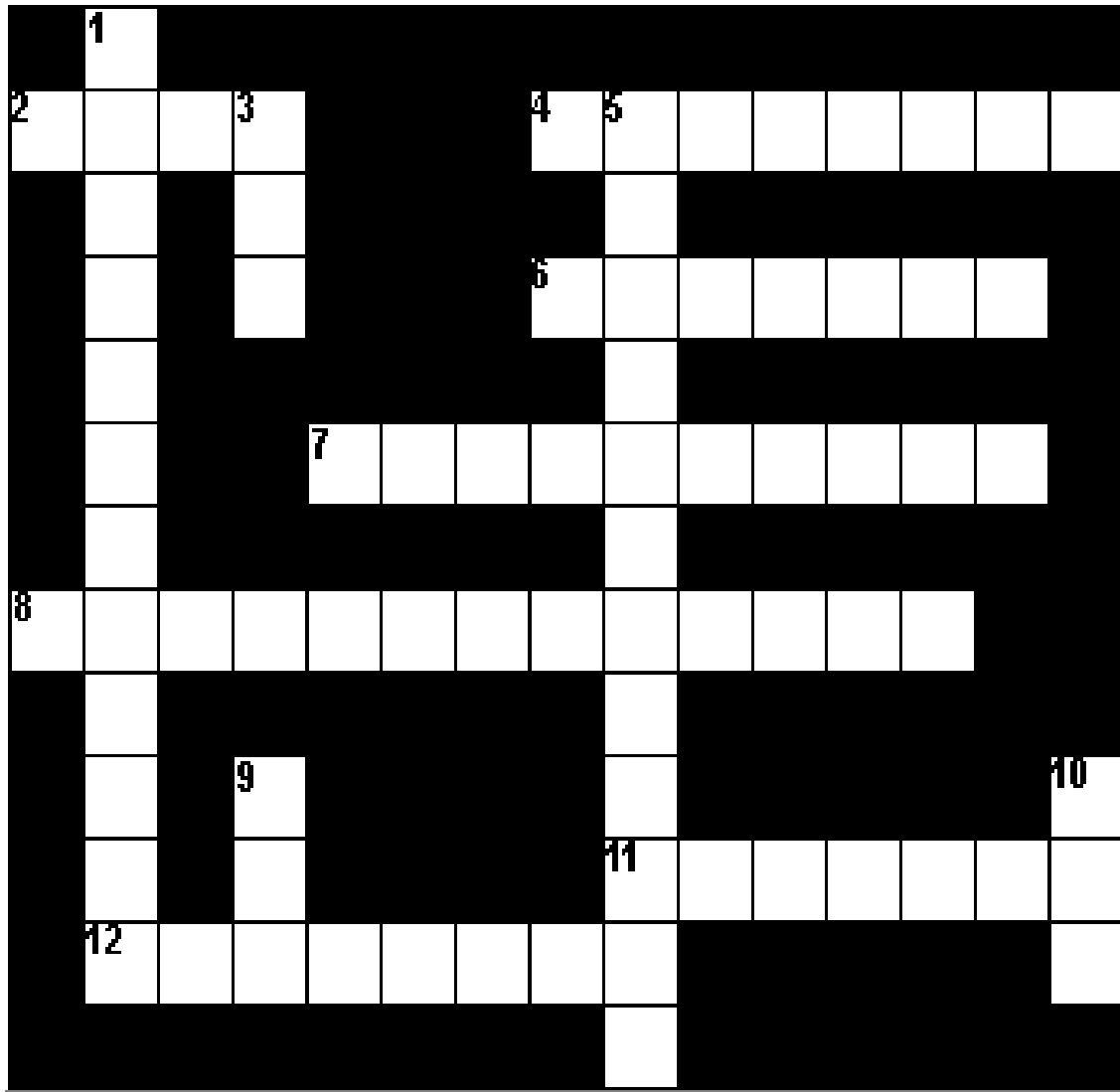
- 20% of all Road Traffic Accidents of 16-20 year olds involve alcohol (Source : Tapent,S.F. & Schwienberg, 2006)
- 45% -75% of alcoholics have impairment
- Can cause memory disorder
- Can cause alcohol associated dementia
- Decreased ability with:
 - ⇒ problem solving
 - ⇒ Communication
 - ⇒ Visio spacial (perception)
 - ⇒ Short term memory (working memory)
 - ⇒ Changes in behaviour and emotions
- 45% -75% of alcoholics have impairment such as:
 - ⇒ Memory disorder
 - ⇒ Alcohol associated dementia
 - ⇒ Decreased ability with problem solving
 - ⇒ Communication
 - ⇒ Visio spacial (perception)
 - ⇒ Short term memory (working memory)
 - ⇒ Can cause changes in behaviour and emotions (Source National Institute on Alcohol Abuse and Alcoholism (NIAAA) - USA)

Answers





Learning Resources



Clues

Across

- 2. Fiber of the cannabis plant; used to make cord
- 4. Stimulant found in tea, coffee, and some sodas
- 6. Drugs derived from poppies
- 7. Alcohol's effect on the central nervous system
- 8. An imagined experience; can be caused by drugs or disorders such as schizophrenia
- 11. Nerve cells
- 12. Drug in tobacco that is a stimulant

Down

- 1. Process by which alcohol is made
- 3. Also known as "angel dust"
- 5. Real name for the drug "speed"
- 9. Abbreviation for tetrahydrocannabinol
- 10. Another name for the drug "acid"



Curriculum Area	PHSE/English	Activity Type	Written Work
Suitable for	11-16 yrs	Activity Number	BB011
Activity Name	Show you care		

Learning Outcome:

To highlight the issues that children with an acquired brain injury face. Create peer understanding of how and why their friends often think they have “changed” and no longer what to play or socialize with them, and the effect that this can have on their brain injured friend.

Materials Required:

Writing materials

Instructions:

Discuss the difficulties that their friend has following their brain injury:

- What happened?
- What parts of the brain have been damaged?
- How has this affected them?
- In what way are they different?
- Do they look the same?

Ask the class to write a letter to their friend; depending upon the age group they can:

1. Write a letter to them in hospital explaining that they understand about what happens when you have a brain injury, and explain how they are going to help them (KS3)
2. Write a letter to their friend who is at home and will be returning to school soon – they need to reassure their friend that they will be their “buddy” and help them adjust to life in school with a brain injury (KS4)

Additional discussions:

1. Why is it important for the person with the disability (of any kind) that we maintain or build friendships with them?
2. How can friends provide practical and emotional support?



Curriculum Area	Art & Design/English	Activity Type	Practical & Written
Suitable for	7-14 yrs	Activity Number	BB012
Activity Name	Brain Safety Brochure		

Learning Outcome:

To promote understanding of why and how you should protect your brain

Materials Required:

- Paper
- Coloured Pencils/Crayons

Instructions:

Create a "Brain Safety Brochure" that is filled with safety tips about how to protect your brain from harm. Use colored paper, pencils, crayons, markers and pens to illustrate your brochure.

Cut out pictures from magazines to show good (and bad) brain safety habits.

Here is a reminder of the key things that children should think about:

1. Wear your seat belt

In a car, bus or airplane, your seat belt will help protect your head and brain from injury. Car accidents are by far the greatest causes of brain injuries, accounting for 37-50% of all brain injuries.

(Statistic from Amer. J. of Diseases of Children, Vol. 144, pages 627-646, 1990 and Brain Injury Association USA)

2. Wear your helmet!

Whether you are cycling, skating or skateboarding, your helmet will protect your head if you fall. Make sure that your helmet meets or exceeds the standards for safety. Head injury is the most common cause of death in bicycle accidents.

3. Stay away from illegal drugs!

Drugs alter brain function - no question about that. Although damage done by some drugs can be reversed, some drugs may change brain function permanently. Why take the chance?



Curriculum Area	Art & Design/English	Activity Type	Practical & Written
Suitable for	7-14 yrs	Activity Number	BB012
Activity Name	Brain Safety Brochure		

4. Know the risks involved with sports!

This applies mainly to boxing, football and the martial arts. However, even climbing, horse riding, diving and skiing have risks. Always wear your safety equipment properly and be in good physical condition for your sport.

5. Look before you leap!

It may sound impossible, but people DO dive into swimming pools without water. Dive only in the deep end of the pool and make sure that the water in rivers, lakes and at the beach is deep enough to dive in head first. Also, be aware of any objects, such as large rocks, that may be hidden under the water.

6. Look both ways before crossing the road!

Children will hear this one many times before, but accidents do happen and you can't be wearing your helmet all the time.

7. Make sure you have a "good" surface around your playground equipment!

Just in case you fall off of play equipment, a soft impact-absorbing surface will cushion your drop. So please don't use trees as climbing frames, because there is no safety surface under them!

8. Eat right!

Your brain needs energy to work its best.

9. Treat chemicals properly!

Many chemicals, such as pesticides and cleaners, contain neurotoxins that can kill nerve cells and damage nerves. These dangerous chemicals can be found in your home or at places of work. Dispose of these materials properly!



Curriculum Area	English	Activity Type	Practical
Suitable for	7-14 yrs	Activity Number	BB016
Activity Name	Brain Wordsearch		

Learning Outcome:

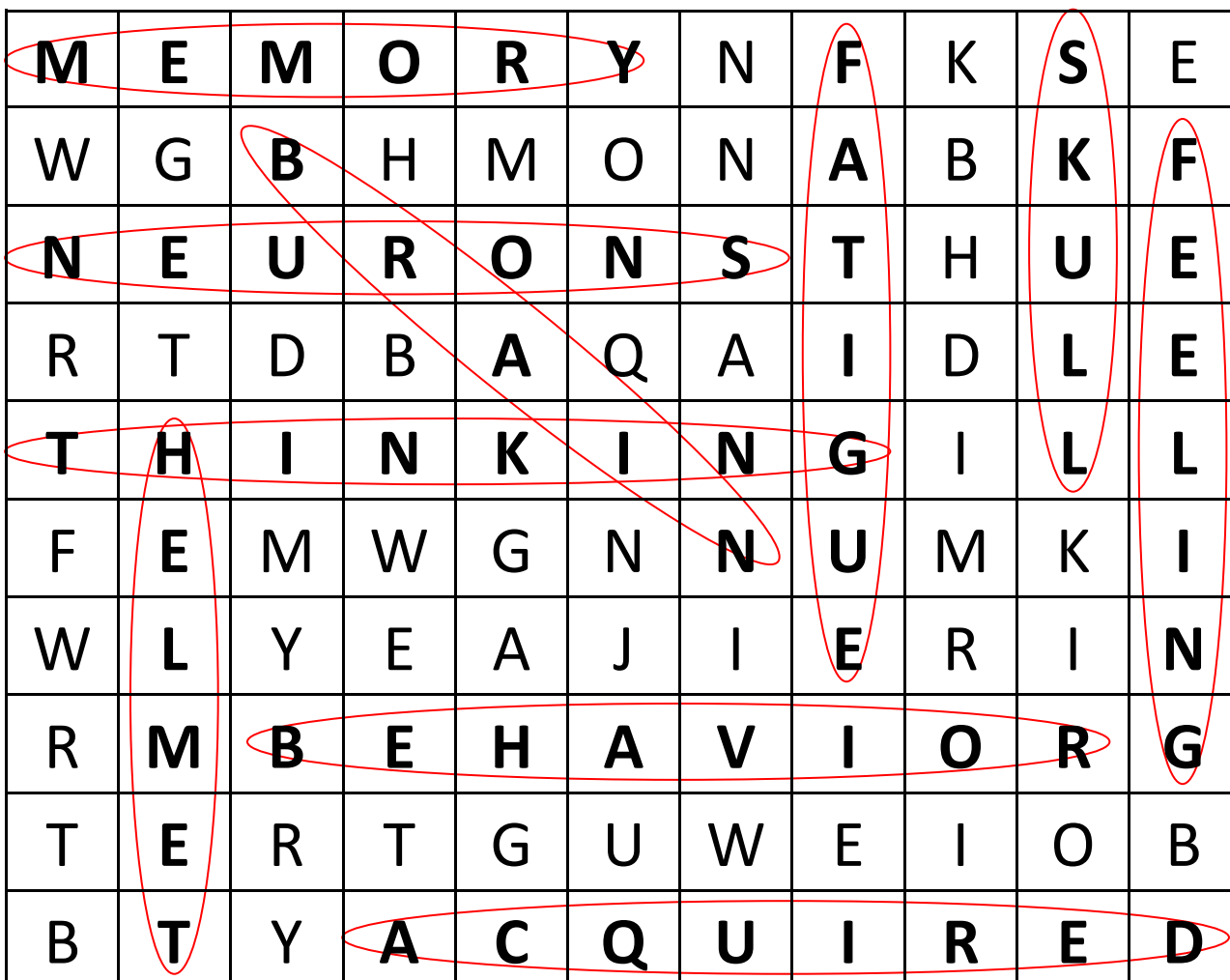
To learn words and spellings related to the brain.

Materials Required:

Worksheet with Wordsearch on it

Instructions:

Copy the Worksheet and hand out to each child to complete





Curriculum Area	English	Activity Type	Practical
Suitable for	7-14 yrs	Activity Number	BB016
Activity Name	Brain Wordsearch		

How many brain related words can you find?

ACQUIRED
HELMET

BEHAVIOUR
MEMORY

BRAIN
NEURONS

FATIGUE
SKULL

FEELING
THINKING

M	E	M	O	R	Y	J	F	T	S	O
S	P	B	D	E	Y	M	A	B	K	F
N	E	U	R	O	N	S	T	L	U	E
C	E	G	B	A	M	D	I	E	L	E
T	H	I	N	K	I	N	G	G	L	L
A	E	N	A	M	L	N	U	B	D	I
G	L	I	E	J	I	G	E	L	K	N
E	M	B	E	H	A	V	I	O	R	G
K	E	R	I	U	O	K	R	S	P	P
O	T	U	A	C	Q	U	I	R	E	D



Curriculum Area	Art & Design	Activity Type	Practical
Suitable for	7-14 yrs	Activity Number	BB017
Activity Name	Brain Car Sticker		

Learning Outcome:

This activity will make use of art and design skills, as well as reinforcing understanding relating to how brain injuries can occur.

Materials Required:

- Paper
- Pencils
- Paints
- Crayons

Instructions:

Ask the children to design a bumper sticker/window sticker for a car (like the “Baby on Board” ones) , that will explain to other drivers why they should drive carefully and avoid accidents that can cause a brain injury.

Additional optional discussion questions — dependant on age of group:

1. How important is it for grown ups to know about the brain as well when they are driving?
2. What are the key messages you wanted to get across with your sticker?
3. How else might your brain get damaged other than a road accident? (An brain injury can be acquired through accident, illness [meningitis, epilepsy, encephalitis, etc], poisoning, stroke or tumour)



Curriculum Area	English/Science	Activity Type	Written
Suitable for	11-16 yrs	Activity Number	BB018
Activity Name	Brain CV		

Learning Outcome:

To reinforce knowledge and understanding of what the brain actually does. Pupils will have to write a CV for their brain to apply for the “job” of organizing, managing, speaking listening etc.

Materials Required:

Pen
Paper

Instructions:

Imagine that your brain had to apply for it’s job. Now write a Curriculum Vitae making sure that you cover all the relevant areas, to sell your brain to its employer!

- What qualifications does it have?
- What is it good at?
- What might it be able to do in the future?
- Is your brain unique? Is it better than any other applicants? Why?
- What parts of the brain are relevant to the “job” it is applying for?
- Why should you even give your brain an interview?



Curriculum Area	English/ICT	Activity Type	Interactive
Suitable for	11-16 yrs	Activity Number	BB021
Activity Name	Compare and contrast		

Learning Outcome:

Understand how similar our brains are to a computer.

Materials Required:

Pen
Paper

Instructions:

Our brains are often compared to a computer. Write a essay that compares and contrasts the features and benefits of the brain, to that of a computer.

Similarity

Difference



Both use electrical signals.

The brain uses chemicals to transmit information; the computer uses electricity. Even though electrical signals travel at high speeds in the nervous system, they travel even faster through the wires in a computer.



Both transmit information.

A computer uses switches that are either on or off ("binary"). In a way, neurons in the brain are either on or off by either firing an action potential or not firing an action potential. However, neurons are more than just on or off because the "excitability" of a neuron is always changing. This is because a neuron is constantly getting information from other cells through synaptic contacts. Information traveling across a synapse does NOT always result in an action potential. Rather, this information alters the chance that an action potential will be produced by raising or lowering the threshold of the neuron.



Both have a memory that can grow.

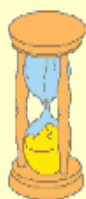
Computer memory grows by adding computer chips. Memories in the brain grow by stronger synaptic connections.

Curriculum Area	English/ICT	Activity Type	Interactive
Suitable for	11-16 yrs	Activity Number	BB021
Activity Name	Compare and contrast		



Both can adapt and learn.

It is much easier and faster for the brain to learn new things. Yet, the computer can do many complex tasks at the same time ("multitasking") that are difficult for the brain. For example, try counting backwards and multiplying 2 numbers at the same time. However, the brain also does some multitasking using the autonomic nervous system. For example, the brain controls breathing, heart rate and blood pressure at the same time it performs a mental task.



Both have evolved over time.

The human brain has weighed in at about 3 pounds for about the last 100,000 years. Computers have evolved much faster than the human brain. Computers have been around for only a few decades, yet rapid technological advancements have made computers faster, smaller and more powerful.



Both need energy.

The brain needs nutrients like oxygen and sugar for power; the computer needs electricity to keep working.



Both can be damaged.

It is easier to fix a computer - just get new parts. There are no new or used parts for the brain. However, some work is being done with transplantation of nerve cells for certain neurological disorders such as Parkinson's disease. Both a computer and a brain can get "sick" - a computer can get a "virus" and there are many diseases that affect the brain. The brain has "built-in back up systems" in some cases. If one pathway in the brain is damaged, there is often another pathway that will take over this function of the damaged pathway.

Curriculum Area	English/ICT	Activity Type	Interactive
Suitable for	11-16 yrs	Activity Number	BB021
Activity Name	Compare and contrast		



Both can change and be modified.

The brain is always changing and being modified. There is no "off" for the brain - even when an animal is sleeping, its brain is still active and working. The computer only changes when new hardware or software is added or something is saved in memory. There IS an "off" for a computer. When the power to a computer is turned off, signals are not transmitted.



Both can do math and other logical tasks.

The computer is faster at doing logical things and computations. However, the brain is better at interpreting the outside world and coming up with new ideas. The brain is capable of imagination.



Both brains and computers are studied by scientists.

Scientists understand how computers work. There are thousands of neuroscientists studying the brain. Nevertheless, there is still much more to learn about the brain. "There is more we do NOT know about the brain, than what we do know about the brain"



Curriculum Area	Languages	Activity Type	Practical & Written
Suitable for	11-16 yrs	Activity Number	BB022
Activity Name	Brain Language		

Learning Outcome:

To know and understand brain related words in various languages. Use internet to translate into foreign languages. Understand the similarities for words across different languages.

Materials Required:

Access to: Dictionaries & Internet

Instructions:

The list on the following page is a guide for some words that are related to the brain – you may wish to expand on this.

Ask student to find as many words in key/different languages as possible.

Additional questions:

- Are there similarities in language structure and use ?
- What are the origins for the word brain?



Curriculum Area	Languages	Activity Type	Practical & Written
Suitable for	11-16 yrs	Activity Number	BB022
Activity Name	Brain Language		

Language		Word for		
English	Brain	Acquired brain injury	Cycle helmet	Look after your brain
Bulgarian	Мозъка	Придобито brain вреда	Цикъл шлем	Виж след мозъчен
Chinese			骑车带头盔	照顾你的大脑
Croatian	Mozak	Stečena mozga ozljede	Ciklus kaciga	Čuvajte vaš mozak
Danish	Hjernen	Erhvervet hjerneskaade	Cycle hjelm	Kig efter din hjerne
Dutch	Hersenen	Verworven hersenletsel	Cyclus helm	Kijk na je hersenen
French	Cerveau	Une lésion cérébrale acquise	Cycle casque	Prenez soin de votre cerveau
German	Gehirn	Erworben gehirn-verletzung	Cycle-helm	Suchen sie nach ihrem gehirn
Greek	Εγκεφάλου	Acquired εγκεφαλική βλάβη	Κύκλος κράνος	Κοίτα, μετά το μυαλό σας
Italian	Cervello	Acquisito lesioni cerebrali	Ciclo casco	Se vuoi, dopo il tuo cervello
Norwegian	Hjernen	Ervervet brain personskaade	Sykkel hjelm	Se etter at hjernen
Polish	Mózgu	Nabytego brain szkody	Cykl kask	Wyszukaj po mózgu
Portuguese	Cérebro	Adquirida lesão cerebral	Ciclo de capacete	Cuidar do seu cérebro
Russian	Мозг	Приобретенного мозговой травмы	Велосипедный шлем	Смотри после вашего мозга
Spanish	Cerebro	Lesión cerebral adquirida	Ciclo de casco	Cuida tu cerebro
Swedish	Hjärnan	Förvärvade hjärn-skada	Cykel hjälm	Titta efter din hjärna



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TOTAL AMOUNT £

Child Brain Injury Trust, Unit 1 The Great Barn, Baynards Green Farm, Nr Bicester, Oxfordshire. OX27 7SG.
Telephone: 01869 341075 www.childbraininjurytrust.org.uk

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