

## Teaching notes

**Year group:** Y8.

**Learning objectives/outcomes** (see **slides 1 and 14** of the PowerPoint):

- describe my caffeine intake
- understand the recommended daily allowance of caffeine
- assess whether caffeinated energy drinks are dangerous or not.

## Resources

**Internet access** is needed, including to YouTube.

- **PowerPoint slides** (downloadable from [www.teachitcitizenship.co.uk](http://www.teachitcitizenship.co.uk)), by typing 22430 into the quick search box).
- **News articles – online in class or printed off in advance**  
'Morrisons bans children from buying high-energy drinks' (*Guardian*)  
<http://www.theguardian.com/society/2013/nov/22/morrisons-bans-high-energy-drinks-children>  
'Teenager collapsed after becoming addicted to Red Bull' (*Telegraph*)  
<http://www.telegraph.co.uk/health/healthnews/3496487/Teenager-collapsed-after-becoming-addicted-to-Red-Bullcaffeine-energy-drinks.html>
- **Online videos**  
Kids' caffeine intake should be controlled (*BBC Newsround*)  
<http://www.bbc.co.uk/newsround/23251617>  
Red Bull gives you wings 2000 (YouTube)  
<http://www.youtube.com/watch?v=K31dg86OmuM>
- **Table – How much caffeine are you drinking?**  
(p.4 below)
- **Chart – Caffeine levels in milligrams**  
(p.5 below)
- **Writing task / Homework – respond to a post on TheSite.org**  
(slide 11 or p.6 below)
- **Sticky notes or mini whiteboards**  
for the plenary activity

## Warmer

**Slide 2 – Which can/bottle has the most/least sugar?**

**Answer:** see **slide 3**.

**Sources of information:**

- Cola: <http://www.coca-cola.co.uk/brands/coca-cola.html>
- Energy drink: <http://energydrink.redbull.com/sucrose-and-glucose>
- Fizzy fruit drink: <http://www.coca-cola.co.uk/brands/oasis.html>
- Recommended daily maximum:  
<http://www.nhs.uk/chq/pages/1139.aspx?categoryid=51&subcategoryid=167>

## Main activities

### Slide 4 – What problems can all this sugar lead to?

Get students to list ideas in pairs then feed back to the class.

Click to display the answers one by one.

### Slide 5 – Discuss the questions with a partner

Students discuss questions such as ‘What is an energy drink?’ and ‘Are energy drinks suitable for breakfast?’.

### Slide 6 – What are the other problems associated with energy drinks?

Divide the class into student A and student B.

Pair A students together and B students together to read their articles and highlight the problems.

Then pair the As with the Bs to share what they have learned.

**Problems from text A** (‘Morrisons bans children from buying high-energy drinks’):

- *Children who consume caffeine before physical activity can have raised blood pressure.*
- *Some adults have died from consuming too much caffeine.*
- *One in 20 teenagers has a can of energy drink instead of breakfast.*
- *It is difficult to ban them to under 16s as people have difficulty proving they are 16.*

**Problems from text B** (‘Teenager collapsed after becoming addicted to Red Bull’):

- *Naomi spent all her money to buy energy drinks and even borrowed money from her friends.*
- *After the high from drinking one, she would feel tired and unhappy, so she would drink another.*
- *She struggled to stay awake in class.*
- *Doctors warned her she could have a heart attack.*
- *Withdrawal symptoms include: headaches; feeling cross; tingling in your arms, legs and fingers.*
- *Caffeine intoxication can lead to: heart irregularities, agitation and in rare cases death.*

### Slide 7 – Should energy drinks be banned?

Students discuss the questions.

Click to reveal the link to the BBC Newsround video.

Click again to reveal the amount of caffeine in an energy drink.

**Answers from the video:**

- How much caffeine is there in a 250ml can of energy drink?  
*80mg per 250ml can = the same amount as in 3 cans of cola*
- How do you feel when you drink these drinks?  
*You feel more awake, so that’s why people drink them in the mornings.*
- How many times a week do you drink them?  
*Three.*
- How would you feel if grown-ups told you that you weren’t allowed to drink these drinks?  
*I wouldn’t be that happy about it, but there’s always other drinks we can have.*

### Slide 8 – How much caffeine are you drinking?

Hand out the table from p.4 below and have students complete it individually with the number of drinks.

Remind them to include tea and coffee, as these also contain caffeine.

### Slide 9 – Caffeine levels in milligrams

Hand out the chart from p.5 below and ask students to find:

- a type of food which contains caffeine (i.e. chocolate)
- the maximum recommended intake for someone of their age (around 80mg).

Have students calculate their actual caffeine consumption.

#### Sources of information:

- <http://www.theguardian.com/society/2013/nov/22/morrisons-bans-high-energy-drinks-children>
- <http://www.telegraph.co.uk/health/healthnews/3496487/Teenager-collapsed-after-becoming-addicted-to-Red-Bullcaffeine-energy-drinks.html>
- <http://www.coca-cola.co.uk/health/caffeine-in-your-can.html>
- <http://www.bbc.co.uk/news/health-15982904>
- <http://healthy Canadians.gc.ca/kids-enfants/food-aliment/drinks-boissons-eng.php>

Note that the sources vary as to exactly how much caffeine is in a can of cola (between 32 and 45mg). This actually makes the 80mg contained in a 250ml can of energy drink equivalent to between 2.5 and 1.8 cans of cola. You could encourage critical thinking and ask students if there are any figures which are different in the different sources of information they have received!

### Slide 10 – Talking partners

Students discuss in pairs the questions about their caffeine consumption.

### Slide 11 – Marketing of energy drinks

Students watch the Red Bull advert and discuss which age group they think it is aimed at.

## Writing task / Homework

### Slide 12 – Respond to a post on TheSite.org

TheSite ([www.thesite.org](http://www.thesite.org)) is a website where young people can find information about everyday problems such as relationships, money, and drink and drugs. They can also post questions to be answered by experts or post comments on the discussion board for their peers to respond to.

Encourage students to write at least 150 words.

## Plenary

### Slide 13 – What do I think now?

You could have students raise their hands or move to one side of the room to show that they have changed their opinion about energy drinks.

You could use sticky notes or mini whiteboards for students to write the most important thing they have learned.

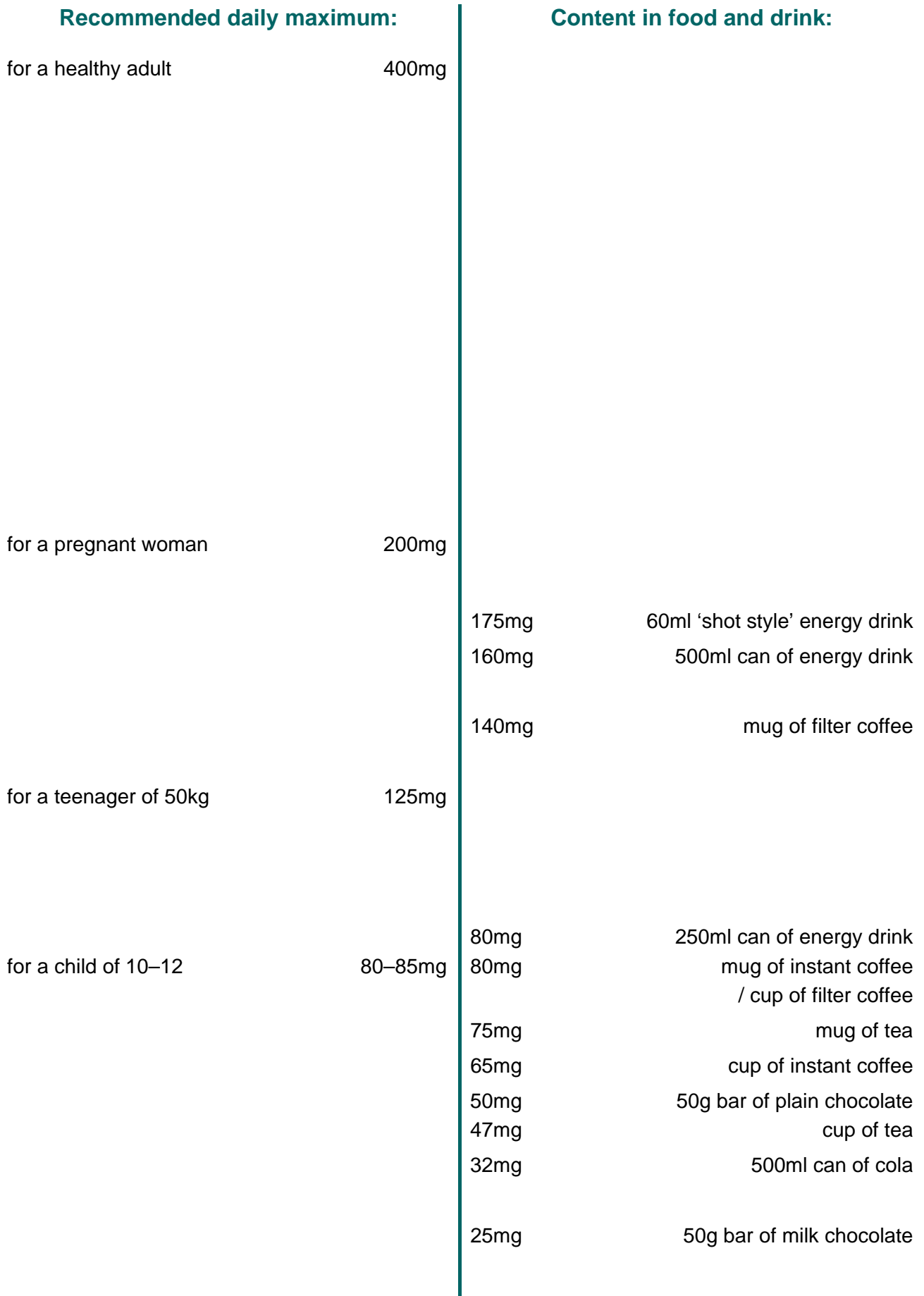
How much caffeine are you drinking?

Complete the table with the number of caffeinated drinks. Don't forget to include cola, tea and coffee!



	Before 11am	11am – 2pm	2pm – 6pm	6pm till bed
Monday				
Tuesday				
Wednesday				
Thursday				
Friday				
Saturday				
Sunday				

Caffeine levels in milligrams



## Writing task / homework

Jack, aged 10, is worried about his caffeine consumption and has posted this question on TheSite.org:

17:50 PM

jackng

I have an energy drink for breakfast and then I have another one with a big bar of chocolate at break time. My mum says this is too much caffeine, but I feel fine. Is it really too much?



Reply

As an informed consumer, what advice would you give him?

Write down your response.

Support your answer with:

- a) knowledge/experience of energy drinks and
- b) information from this lesson.

Swap your response with a partner. Have they thought of anything that you forgot?

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## Is too much caffeine dangerous?

By the end of this lesson I will be able to ...

- describe my caffeine intake
- understand the recommended daily allowance of caffeine
- assess whether caffeinated energy drinks are dangerous or not.



## Look at these drinks:



A 500ml can of cola



A 250ml can of energy drink



A 500ml bottle of fizzy fruit drink

Which can/bottle has the **most** sugar?  
Which has the **least** sugar?

They have around half the recommended maximum in just one serving!



A 500ml can of cola:  
53.0g



A 250ml can of energy drink:  
27.5g



A 500ml bottle of fizzy fruit drink:  
21g

Recommended daily maximum intake of sugar =  
men: 70g (13 teaspoons); women: 50g (10 teaspoons)

What problems can all this sugar lead to?



53g



27.5g



21g

Sugar rush

Concentration difficulties

Decaying teeth

Diabetes

Mood swings

Premature ageing

Weight gain

Discuss the questions with a partner

What is an energy drink?

How often should energy drinks be consumed by young people?

Who decides which ingredients go into energy drinks?

Are energy drinks suitable for breakfast?

How many of you drink energy drinks?



What attracts you to a particular energy drink?

What techniques do advertisers use to sell energy drinks to young people?

As well as sugar, what are the other problems associated with energy drinks?



Group A students, read this article:

<http://www.theguardian.com/society/2013/nov/22/morrisons-bans-high-energy-drinks-children>

Group B students, read this article:

<http://www.telegraph.co.uk/health/healthnews/3496487/Teenager-collapsed-after-becoming-addicted-to-Red-Bull-caffeine-energy-drinks.html>

Highlight all the problems associated with drinking energy drinks.

Now pair up, A + B, and share what you've learned.









What do I think now?



Have I changed my opinion about energy drinks because of this lesson?


What is the most important thing that I've learned in this lesson?

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### Is too much caffeine dangerous?

I can ...

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- assess whether caffeinated energy drinks are dangerous or not.



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